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# ***JPRS Report***

## **Epidemiology**

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# Epidemiology

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## ANGOLA

### Cholera Kills Eight in Kwanza Norte 54000028 Luanda JORNAL DE ANGOLA in Portuguese 31 Oct 87 p 3

[Text] N'Dalatando—Fifty-five suspected cases of cholera, of whom 25 are less than 15 years of age, has already killed eight persons in this city, it was learned by JORNAL DE ANGOLA from a source close to the provincial health office.

The epidemic made its appearance this month when seven cases were detected and taken to the Regional Hospital of the city of N'Dalatando.

Provincial Director of Public Health Dr Kiala Simao declared that some measures were taken to control the situation, such as the broadcast of preventive measures by the provincial broadcasting station, and the wholesale vaccination of the population that was not reached by the previous campaign.

He added, however, that lack of sufficient vaccine has reduced the area of action to four fixed health stations located in only four neighborhoods on the outskirts of the city where the epidemic broke out.

This situation, he said, will be overcome soon when more vaccine is received, which will allow the establishment of another 22 health stations throughout the municipality.

According to Dr Kiala Simao, also the clinical director of the Regional Hospital, the unsanitary state of the environment, now shameful in some zones, is at the base of this situation. This led the Provincial Public Health Directorate to recommend to the pertinent jurisdictions that campaigns be initiated to clean up and beautify residential areas, with the imposition of fines on those who do not comply.

It is well to remember that on the provincial level the municipality of Kambambe was among the first to be affected by the epidemic, which resulted in 11 verified deaths.

At this time more than 52,000 have been vaccinated in that locality, whose situation is now stabilized.

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## BARBADOS

### Ministry of Health's AIDS Update Reports New Cases Bridgetown DAILY NATION in English 22 Oct 87 p 1

[Text] Three more Barbadians have died from AIDS.

The three died between July and September this year when eight new cases of the incurable disease also surfaced.

The Ministry of Health in its quarterly update on the dreaded disease yesterday disclosed that the latest deaths brought the number in Barbados to 30 since AIDS first surfaced in 1984.

The eight new cases brought to 52 the number of cases diagnosed to date at the Queen Elizabeth Hospital (QEH).

Among the eight latest persons to contract the disease, seven were males. Six were between the ages of 20 and 39 years.

The release from the ministry also disclosed for the first time that AIDS cases have come about through blood transfusion. It said two of those diagnosed in the year's third quarter "were associated with blood transfusion" but that the persons, who were not identified by sex, received the transfusions before 1985 when the QEH started screening blood for the HIV antibody.

According to the ministry, two of the seven latest males were homosexuals while one admitted to regular association with prostitutes.

The release, which said too that one of the carriers contracted the disease outside of Barbados, added that behaviour associated with known risk factors could not be associated with two of them.

The number of cases between July and September was the same as that which occurred in the year's first quarter and three more than the five recorded between April and June.

The ministry also disclosed that of the donated blood samples at the QEH only two were found to contain the AIDS virus.

It said 798 blood samples were tested for the HIV antibody and of these 625 samples were collected from donors while the remaining 173 were for diagnostic purposes.

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## BOTSWANA

### Government To Install Condom Vending Machines 54000232b Gaborone BOTSWANA DAILY NEWS in English 27 Nov 87 p 2

[Text] Gaborone: The Ministry of Health will during the next financial year install condom vending machines in public places as part of its AIDS control campaign.

Health Minister, Mr Lesedi Mothibamele explained that the machines could have been in use by now had it not been for an unforeseen problem with the coin slots.

The machines are currently being modified to suit Botswana's specifications and should be operating by the next financial year, the Minister promised.

Mr Mothibamele said the machines were necessitated by the fact that most people were too shy or too busy to queue up at the public clinics.

High quality condoms sell for five Thebe per dozen at clinics and the intention of the ministry is to have machines with 5t, 10t, 25t, and 50t slots.

In Johannesburg, South Africa, the city council is reported to be considering an application to install 100 condom/tampon vending machines in public toilets.

If the licensing board approves, the company responsible plans to install the machines in the toilet facilities of hotels, supermarkets, pharmacies, escort agencies and clubs frequented by homosexuals.

A Johannesburg medical officer is reported to have said in view of the problems of family planning and prevention of sexually transmitted diseases including AIDS, any proposal of making condoms easily available would be welcome.—BOPA

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## BRAZIL

### Leprosy Cases in Sao Paulo Number 2,500 Annually

54002005c Brasilia CORREIO BRAZILIENSE in Portuguese 22 Oct 87 p 18

[Text] Sao Paulo—About 2,500 new cases of Hansen's disease are recorded in the state of Sao Paulo annually. Clovis Lombardi, a professor at the School of Public Health at the USP [Sao Paulo University], says the figure does not indicate an unmistakable increase, "but there has in fact been a slight upward trend in the incidence of that endemic disease in recent years."

Lombardi, who is also coordinator of the Sao Paulo Secretariat of Health's Hansen's Disease Program, says that failure to control the disease in this country is related to a number of causes. "The basic factor is the fact that Hansen's disease affects mostly the lower socio-economic levels: it strikes those least provided for from the standpoint of health."

According to the professor, the victim of Hansen's disease bears a very sizable psychosocial burden. "Much more than any other patient, he suffers from discrimination, which makes control difficult."

Hansen's disease is treated at state health centers. Lombardi says: "We want all the health stations, including those operated by INAMPS [National Institute for Social Security Medical Assistance], to be able to provide specialized treatment."

In Rio de Janeiro yesterday, the director of the Department of Infectious Diseases at New York's Bronx Lebanon Hospital, Prof Victor Lorian, announced the excellent results achieved in treating renal infections by administering much smaller doses of antibiotics and thus preventing side effects.

Prof Victor Lorian, who is participating in the Second International Symposium on Antibiotic Therapy, says there is no need for massive doses of antibiotics provided that the patient's immune capacity is normal. "With one-tenth of the conventional dose, we have achieved the same effectiveness in treating infections. Everything will depend on the patient's condition," he said.

Concerning the effect of antibiotics in treating patients carrying AIDS, Victor Lorian explained that unfortunately, antibiotics merely prolong and temporarily improve the patient's life, but "they do not bring positive results, owing to the low immunity of those patients." Concerning the discovery of an "antiadhesive" substance which acts to keep bacteria from adhering to surfaces and thereby prevents infections, the professor said that antibiotics in small doses also act as antiadherents.

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### Reported Cases of Transmissible Diseases Near Triple in 10 Years

#### Poor Nutrition Blamed

54002005a Sao Paulo O ESTADO DE SAO PAULO in Portuguese 1 Nov 87 p 11

[Article by Iara Dias]

[Text] The number of reported cases of transmissible diseases has almost tripled over the past 10 years. At least 9,000 people contracted Hansen's disease in 1977, but by last year the number was up to more than 23,000. Measles—a disease for which a vaccine exists—affected more than 54,000 children in 1977, but 113,000 cases were recorded in 1986.

The question of health is directly related to nutrition, and half of the Brazilian population is poorly fed. Iaro Ribeiro Gandra—one of the country's top nutrition specialists and a retired professor from the School of Public Health at the USP [Sao Paulo University]—warns that "undernourished people are liable to fall sick at any moment, and a simple cold can kill. Measles is the

typical example. That disease kills only poor, undernourished children and is practically harmless as far as well-fed children are concerned."

Disease is part of a vicious circle: normally, an undernourished individual lives in an unhealthy environment with no basic sanitation, extremely bad housing, and no medical care. Davi Rumel, assistant professor at the Department of Epidemiology of the USP School of Public Health, has investigated the causes of death among Sao Paulo men in their productive years (between 15 and 64 years of age) by type of occupation. "Mortality data reflect social inequalities. The rich live longer than the poor. In the economically active population, there are 15 times as many deaths among the unemployed as there are among intellectuals and service employees."

Iaro Gandra says that mortality is very high among children born to undernourished mothers. "Of every 1,000 children born alive in pockets of poverty such as the Northeast, 200 die during their first year of life. Those are the children who weigh less than 2.5 kilograms at birth." But in his opinion, it does no good simply to prevent infant mortality.

"What should be done with the 800 children who do not die? The government not only fails to provide food. It also does not provide medical care or schools—in short, it does not attend to psychomotor development—the development of the person. We have 20 million preschool children—between the ages of 2 and 6—and the government is taking care of only 2 million of them. That leaves 18 million children "unassisted" during the period when their ego is developing—during the stage of mental development. That is the age when the government should intervene," Gandra warns.

#### Serum

The major cause of infant mortality in Brazil is diarrhea in undernourished children. "The government is waging its campaign on behalf of household serum to combat diarrhea. That is a good program. But there is a lack of basic sanitation. We need a more aggressive information program," the expert says.

There are 5 million houses in Brazil with only one room (serving as living room, kitchen, and bedroom), and 700,000 of them are occupied by more than five people. "How can we talk about basic sanitation and epidemiological control in an environment where children and adults live together in such a small space? Either the child wanders around in that room or he goes out in the street," says Gandra.

In Davi Rumel's opinion, the rise in the number of cases of tuberculosis and Hansen's disease over the past 10 years is a social indicator. "Those two diseases are preeminently social diseases. When the population's socioeconomic level falls, they increase." About 54,000 people had tuberculosis in 1977. In 1986 the number was

over 83,000. "And tuberculosis is more democratic. But Hansen's disease is a poor man's disease. Hansen's disease disappeared from Scandinavia at the end of the last century, before medical treatment existed, simply because of the rise in the population's standard of living."

#### Measles

In his investigation, Rumel found that tuberculosis appeared five times more often among manual workers and the unemployed than among intellectuals and people who work in services. In the case of measles, the epidemiologist made a comparison with smallpox, a disease that was eradicated throughout the world in 1972. "Smallpox and measles are transmitted through the air by viruses. They have no reservoir in nature except man, and there are effective vaccines to prevent them. The only difference is that the WHO was interested in financing an international vaccination campaign against smallpox, and it is not interested in a similar campaign against measles because measles is a serious disease only among the poor."

Measles weakens the organism's general resistance, thus facilitating other infections. The most common complication is pneumonia. "Brazil needs to conduct a campaign to eradicate measles. There is no use waiting for the WHO. Sao Paulo has already had one campaign this year, and it proved that the vaccinations reduced mortality," says Rumel. The School of Public Health has a special branch office in Araraquara. Since the vaccination campaign in May of this year [1987], only one case of measles has occurred in the city, and even that was from "an imported source of infection."

#### Malaria

The rise in the number of malaria cases (from 101,000 in 1977 to 443,000 in 1986) is due to the occupation of Amazonia, in Davi Rumel's opinion. "It was to be expected that expansion into Amazonia would bring an increase in the number of malaria cases." Malaria is transmitted by mosquitoes of the genus Anopheles, and no vaccine exists as yet. This is an old disease, and it is the chief obstacle to the settlement of Amazonia. "Discovering a malaria vaccine is a question of strategy."

And that vaccine is already being tested on humans. It is being developed in New York by the Nussenweigs, a man-and-wife team of Brazilian researchers from the USP School of Medicine who were stripped of their political rights and expelled from Brazil as a result of the military coup in 1964. "Brains should be considered a national resource. One consequence of the confusion between science and politics that occurred in the Brazil of 1964 was the collapse in the development of research. It takes years to produce a scientist. He cannot be thrown out because he disagrees with the government politically. A collapse in research is almost irreversible. We have the example to prove it. A group of researchers from the

Manguinhos Institute and the USP was thrown out in 1964, and tropical diseases such as malaria and yellow fever have increased alarmingly," Davi Rumel complains.

Concerning schistosomiasis, which rose from 103,000 cases in 1977 to 223,000 in 1985, Rumel feels that the increase is due to improved medical care: "While the number of reported cases is rising, the reason is that more fecal examinations are being made. But diagnosis is not enough," the epidemiologist warns. "Sanitation is needed in the rural areas to eliminate the snail that transmits the disease through feces. More than that: we need to change the behavior of people living in rural areas. They need to stop washing their clothes on river-banks and swimming in those waters on hot days. This is a difficult form of control, because it interferes with human behavior."

**Few Funds Available for Health Care**  
*54002005a Sao Paulo O ESTADO DE SAO PAULO in Portuguese 1 Nov 87 p 11*

[Article by Sonia Cristina Silva]

[Text] Brasilia—The appearance of AIDS in Brazil has led the authorities and the population to demand preventive measures for combating that incurable disease. But the debate about AIDS has overshadowed the seriousness of other endemic diseases directly linked to the lack of basic sanitation. One of those diseases is malaria, the incidence of which has been increasing in recent years.

The new minister of health, Borges da Silveira, says that endemic diseases affect "millions of Brazilians, who die or lose their ability to work and go from one hospital to another." He recalls that less than 10 percent of the Federal budget goes to the health sector, compared to over 40 percent in developed countries. Borges da Silveira promises to attack once and for all the problem of donated blood in Brazil. The priority will be to prevent the spread of AIDS through blood transfusions, but, the minister says, this will also prevent the spread of malaria and Chagas' disease.

According to Borges da Silveira, priority will also be assigned to structuring the Superintendency for Public Health Campaigns (SUCAM), which is responsible for controlling various endemic diseases but which is also prepared to accompany the people who are in the process of occupying and exploiting new land, since that is when most endemic diseases occur.

**Personnel**

According to the superintendent of SUCAM, Joselio Carvalho Branco, his agency has only 33,000 sanitary agents, whereas 50,000 are needed. Moreover, the average pay corresponds to one minimum wage, making it

hard to keep personnel. Joselio says that some employees quit their jobs to work in the gold fields, where malaria is proliferating and where they were sent precisely to combat that disease.

Last year, about 59 million people were exposed to malaria infection in areas of endemic transmission: legal Amazonia, Rondonia, and Para. Over the past decade, Amazonia has recorded a population increase of 50.4 percent, the highest in Brazil. There are currently over 1,000 gold fields in the region, and those are the places where poor housing conditions and the lack of health care favor the spread of malaria. In Para, discovery of the Serra Pelada gold field and the exploitation of gold deposits has made the place a focus attracting migrants, many of them infected. Even so, SUCAM last year carried out about 1.8 million spraying operations using 1,600 metric tons of DDT. That represents only 73.6 percent of the scheduled spraying of houses.

**Chagas' Disease**

Another endemic disease causing concern, although no priority has been assigned to it, is Chagas' disease, which has now infected more than 5 million Brazilians. Another 63.5 million are still exposed to the disease in endemic areas, which cover 36 percent of the country in a strip of territory extending from Maranhao to Rio Grande do Sul. Last year, SUCAM conducted nearly 3.9 million inspections of dwellings in those areas, carried out 750,000 spraying operations, and captured nearly 4 million insect vectors of the disease. That entire volume of work represents only 41 percent of what was scheduled. Activity suffered a setback because SUCAM's agents were transferred to the program for combating dengue fever, a task for which they were not prepared.

Dengue fever in its benign form existed in Brazil until 1940. Outbreaks occurred again in 1985, and new cases appeared in March of this year. It has spread rapidly, with 27,300 cases being reported through March. But the actual figure is higher. It is estimated that over 1 million people have been infected since the appearance of the disease in 1985. The shortage of personnel makes the work of eradication difficult. According to SUCAM's data, the Aedes aegypti mosquito still exists in 15 states.

Joselio Carvalho Branco says that no cases of dengue fever have been reported for over a month. He also says that he has only 700 men in Rio de Janeiro and that they must cover the interior and the urban area as they inspect shantytowns and look for foci of the mosquito.

**Schistosomiasis**

It is estimated that about 5.4 million people contracted schistosomiasis in 1986, most of them from Minas Gerais and Bahia, the states where the number of cases has reached a critical level. In 1977, 22.5 million people were exposed to the disease, but the figure was up to 35

million by last year as a result of the population's poverty combined with the lack of access to basic information concerning hygiene and inadequate funds for combating the disease.

The government's failure to pay attention to preventive measures results in reduced coverage through vaccinations when there is a drop in the number of cases of a specific endemic disease. That is what is happening in the case of measles, which kills 3,000 people annually, most of them children who could be saved by vaccination. Moreover, the campaigns advertised in the media are not intensive enough to guarantee lasting awareness. In October, the television stations broadcast government health messages for only 2 weeks. "A person's chance of seeing that message was about the same as his chance of winning the Lotto," says Marina Wagner of the National Division of Epidemiology in the Ministry of Health.

11798

**Dengue, Yellow Fever Foci Found in 59 Rio Municipalities**  
54002005b Rio de Janeiro *O GLOBO* in Portuguese  
10 Nov 87 p 11

[Text] Of the 66 municipalities in the state of Rio de Janeiro, only 7 do not contain foci of Aedes aegypti or albopictus, the mosquitoes which transmit dengue and yellow fever, according to the Superintendency for Public Health Campaigns (SUCAM). Only Aedes aegypti was found in 10 of the municipalities, while only Aedes albopictus was found in another 10, and both species were found in 39 municipalities, including Rio de Janeiro itself. The difference between those two species of mosquito is that aegypti is more likely to be found in houses. The variety of albopictus foci makes it difficult to combat that species.

The seven municipalities with no incidence of the mosquitoes are Petropolis, Miguel Pereira, Rio Claro, Parati, Trajano de Moraes, Santa Maria Madalena, and Italva. The 10 with Aedes aegypti are Angra dos Reis, Mendes, Niteroi, Sao Goncalo, Itaborai, Marica, Nova Friburgo, Silva Jardim, Conceicao de Macabu, and Arraial do Cabo. Those with albopictus are Resende, Rio das Flores, Paraiba do Sul, Teresopolis, Sumidouro, Carmo, Duas Barras, Cantagalo, Cordeiro, and Sao Sebastiao do Alto. Both species are found in all the others.

SUCAM, which has three districts in the state of Rio de Janeiro for its operations in the municipalities—each being responsible for more than 20—does not have enough personnel to control the foci in every area. In the district headquartered in Campos, for example, there are only 78 sanitary guards, whereas a survey by its Coordinating Office for the Control of Yellow and Dengue Fever shows that it needs 309—in other words, it is short 231 of the number of men needed for work in the field. The Niteroi District has 1,877 men, but it needs 2,967, so it is 1,090 short. And the Nova Iguacu District has

only 398, compared to the 1,256 it needs, making it 858 guards short. Besides that total of 2,179 needed for work in the field, SUCAM also needs another 1,107 men—biologists, inspectors, laboratory assistants and technicians, and so on—in its other departments.

But according to the Committee for the Integrated Action Plan for Controlling Dengue Fever, which includes such bodies as the municipal and state secretariats of health, FEEMA [State Environmental Engineering Foundation], COMLURB, the Secretariat for the Environment, a representative of SUCAM itself, and others, cases of dengue fever are beginning to reappear in Niteroi. During a meeting at SUCAM yesterday, the committee was unable to obtain planning data—such as the number of buildings in each municipality to be treated as mosquito foci—which it has been trying to get from SUCAM since last week. The coordinator of the Program for Controlling Dengue Fever had gone to make a speech somewhere else even though he had previously confirmed yesterday's meeting, and his deputy, Cristovao Maciel, who heads the Epidemiology Department, said he did not have the data:

"Planning for 1988 has been interrupted pending a political decision by the ministry."

In order to map out an integrated plan for mosquito control, the state secretary of health, Sergio Arouca, has telephoned Joselio Branco, SUCAM's superintendent in Brasilia, to request a meeting tomorrow for formulating policies and strategy. According to the assistant secretary of health, Luiz Antonio Santini, it will probably be possible at that meeting to overcome the difficulties standing in the way of obtaining the data needed for working out the plan.

11798

## BURUNDI

**Health Minister Says 1,000 AIDS Cases Known**  
04201736 Dakar PANA in French 1420 GMT 20 Dec 87

[Text] Bujumbura, 20 Dec (ABP-BUR/PANA)—More than 1,000 cases of people suffering from AIDS have been registered in Burundi and 40 percent of those affected have died, Burundian Health Minister Tharcisse Nyunguka revealed in Bujumbura today.

Mr Nyunguka, who was speaking at a ceremony for the signing of a \$14 million loan agreement between his country and the International Development Agency (IDA) said Burundi is setting up a medium-term plan to fight the problem which "we take very seriously".

Among methods of fighting the problem the Burundian minister named the education of the population and provision of correct information which, he said, must be continued and constitute the best means of prevention.

The IDA loan to Burundi, it was added, is earmarked for health programs related to family planning, mother and infant care, the fight against AIDS, and the improvement of the effectiveness and impact of the health system and the improvement of demographic data.

## CHINA

### Study of *Salmonella Typhosa*, *S. Paratyphi* Combination R Plasmid

54004130b Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese Vol 6 No 4, Jul 86 p 203

[Article by Huang Yongnian [5613 3057 1628] and Shi Changren [2514 1603 0088]]

[Text] The 109 strains of *salmonella typhosa* and *S. paratyphi* collected from the three Northeastern provinces were analyzed for their morphology, biochemistry, and serology. These strains were then diluted and plated to determine their resistance to antibiotics: Chloromycin (Cm), Tetracycline (Tc), Streptomycin (Sm), Kanamycin (Km) and ampicillin (Ap). The resistance standards of these five antibiotics are: 25 gmg/ml for the first three and 12.5 gmg/ml for the last two.

The antibiotics sensitivity tests showed that the number of strains resistant to Sm, Tc, Cm, and Ap were respectively 96 (88.1 percent), 5 (4.6 percent), 4 (3.7 percent), and 1 (0.9 percent). There were no strains resistant to kanamycin. There were seven strains showing resistance to two to three antibiotics: one strain resistant to Cm, Ap, two strains resistant to Sm, Tc, Cm, three strains resistant to Sm, Tc and one strain resistant to Sm, Cm.

We selected seven double or triple resistant strains and nine single resistant strains (antibiotics resistance greater than 200 gmg/ml) as donors, and used  $C_{600}NAr(F)$  as recipient in a combination test. During the experiment, cells were activated using L culture medium; Hi culture medium was used in the combination process; and MacConkey plates with antibiotics were used to select combination plasmids. The results showed that three strains (BM10, BM77, BM92) can respectively transmit their resistance to Cm Ap, Sm Cm, Sm Tc Cm antibiotics to the recipients.

Comparison experiments eliminated the possibility of transduction and transformation, and the driving action of the F factor, and proved the antibiotics resistance on the gene R plasmid.

The results of this report show that although many *salmonella typhosa* and *S. paratyphi* strains common in recent years in the Northeast region were not sensitive to streptomycin, most were sensitive to the other four antibiotics. Only 3 percent of the strains were resistant to chloromycin. Therefore chloromycin still could be used as the first choice in drug treatment. However, it should

be realized that in China there were already strains that carry anti-chloromycin R factors, and we should be mindful that these strains can explode into a local epidemic.

12996/09599

### Immunity Observation of

#### Meningitis-Cerebrospinalis Epidemica

54004130c Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese Vol 6 No 6, Nov 86 p 352

[Article by Gao Huiying [7559 1979 5391], Zhu Xiyuan [4376 1585 1254], Chen Huacui [7115 5478 4733], and Fang Hesong [2455 7729 2646]]

[Text] Between 1980 and 1982, we determined the total complement, C3, Immunoglobin and anti-nucleo-antibodies of 150 Meningitis-cerebrospinalis epidemica (hereafter ME) children in the Second Hospital of Daqing. We also observed the plant hemo-agglutinin (PHA), streptodornase-streptokinase (SD-SK) skin-test results. Of the 150 cases of ME children, 56 were mid-brain cases, 67 were shock cases, and 27 were mixed cases. The youngest patient was 3 months, and the oldest was 14 years old. Total complement was measured by minute amounts of 50 percent hemolysis; serum C3 was measured by the single dilution method; immunoprotein was determined by the immunodilution method; and anti-nucleo-antibodies were determined by the immunoenzyme adsoption method.

Results: Serum complement levels decreased in ME children. In 88 children in the crisis phase, 18 cases were lower than normal (less than or equal to 1.2). In 62 children in the recovery phase, 12 cases were lower than normal. In comparison with normal humans (1:4 to 1:16), ME crisis and recovery phase serum total complements both dropped significantly ( $P$  less than 0.01). One year after cure of ME, 21 cases when retested still showed low total complement levels, and still very significantly different from normal humans ( $P$  less than 0.01). Serum C3 dropped in ME children. In 85 children in the crisis phase, the average value was 71.68 plus or minus 21.69 gm/dL. In 56 children in the recovery phase, the average value was 70.86 plus or minus 24.3 gm/dL, compared to normal humans (98.05 plus or minus 37.08 gm/dL)—very significantly different. Very sick patients showed an even more pronounced drop in C3 levels. One year after cure of ME, 21 cases when retested showed an average of 74.90 plus or minus 14.80 gm/dL—still very significantly different from normal humans ( $P$  less than 0.01). In 81 PHA tests, the average diameter of the skin inflammation of children in the crisis phase was 7.58 plus or minus 3.95 mm, and that of children in the recovery phase was 11.52 plus or minus 6.22 mm. The two averages showed very significant difference ( $P$  less than 0.01), and both showed very significant difference ( $P$  less than 0.01) when compared to normal humans.

(16.08 plus or minus 6.33 mm). In 33 SD-SK skin test, the average diameter of the skin inflammation of a child in the crisis phase was 8.38 plus or minus 6.90 mm, and that of children in the recovery phase was 12.12 plus or minus 7.76 mm. The two averages showed very significant difference (P less than 0.01). In 69 tests of immunoglobulin, the average value of IgM in the crisis phase was 61.85 plus or minus 37.85 gm/ml, that in the recovery phase was 84.17 plus or minus 45.82 gm/ml. The two averages showed significant difference (P less than 0.05 greater than 0.02). IgA and IgG did not show patterned changes. In 67 antinucleo-antibody tests, 13 cases showed positive results.

It can be tentatively concluded from the above results that in ME children, the complement system showed changes, total complement and C3 decreased, and cell immunologic functions were probably lower than normal. About 19.4 percent antinucleo-antibodies showed positive results. The meaning of these results requires further study.

12996/09599

**Study of Tsutsugamushi Disease Rickettsia**  
54004130d Beijing ZHONGHUA WEISHENGWUXUE  
HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF  
MICROBIOLOGY AND IMMUNOLOGY] in Chinese  
Vol 6 No 6, Nov 86 p 356

[Article by Ding Hanfei [0002 1383 7378] and Feng Huimien [7458 1979 2404] of Zhongshan Medical School, Institute of Microbiology and Immunology]

[Text] In order to explore the basic pathological relationship between immunorecombinants and Tsutsugamushi, we used Tsutsugamushi rickettsia strong poison strain (strain B), weak poison strain (strain 49) and glutaraldehyde blanched strain B vaccine innoculated into the abdomen of CBA mice. After 16 days, mice innoculated with strain B all died. Mice innoculated with strain 49 or strain B vaccine showed no morbidity. Experimental mice kidneys were obtained dynamically and sectioned for observation. Upon tissue pathological examination of three groups of mice 12 to 16 days after being innoculated with Tsutsugamushi rickettsia, the glomerulus membrane cells and the membrane matrix showed discernible proliferation. Capillary walls were pressed and obviously narrowed. Cellulose also gathered in the glomerulus membrane region. Immunofluorescent examination showed that there were particulate and granular IgG deposits in the glomerulus membrane region. Acid elution and indirect immunofluorescent technology was used to prove that the immuno-compound deposit in the kidney contained Tsutsugamushi rickettsia specific antibodies.

After analyzing the experimental results, we believe that (1) experimentally induced mice kidney pathology by Tsutsugamushi rickettsia is membrane proliferation glomerulonephritis, whose origin and development are

unrelated to the toxicity and activity of the innoculated Tsutsugamushi rickettsia. (2) The immuno-compound formed with Tsutsugamushi rickettsia as the antigen is very probably an important mechanism in the experimental inducement of the mice kidney disease. However, it was not possible to prove that it was related to the occurrence of the experimental induced Tsutsugamushi disease in mice and their death. (3) When entire Tsutsugamushi rickettsia either as live organisms or vaccine were innoculated into animals and humans, it is possible to cause immuno-compound to deposit and continue its damage in the local area.

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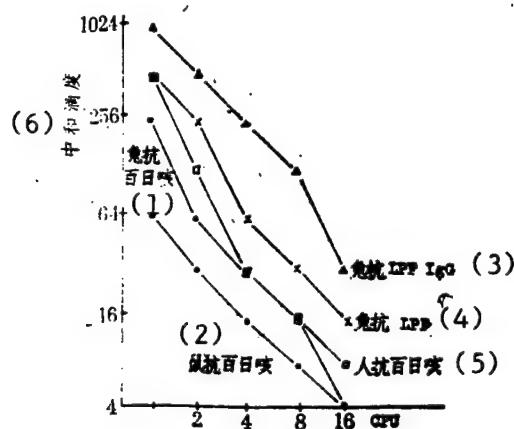
**Measurement of Pertussis Toxin, Anti-Toxin**  
54004130e Beijing ZHONGHUA WEISHENGWUXUE  
HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF  
MICROBIOLOGY AND IMMUNOLOGY] in Chinese  
Vol 6 No 6, Nov 86 p 365

[Article by Liu Dezheng [0491 1795 6927], Zhou Xiaohong [0719 2556 4767], Wang Ying [3769 3853], Chiu Baoming [6392 1405 2494], and Tang Qiaoying [0781 1564 5391] of the Ministry of Public Health Biological Products Research Institute, Beijing]

[Text] Gillenius (J Biol Stand 13:61 1985) reported using Chinese hamster oophoron (CHO) cells method to determine pertussis antigen toxicity and anti-PT antibodies. We conducted preliminary studies on the conditions and sensitivity of this method.

CHO cell strains (API) and 10 percent bovine serum 1640 nutrient solution were used in the experiment. Single-cell layers were digested and suspended by 0.25 percent pancrease. In toxicity determination tests, it was mixed with an equal volume of pertussis toxin of varying concentrations. In neutralization tests the toxin was mixed with equal volumes of rabbit immunoserum of varying dilutions. It was then neutralized for 3 hours at 37 degrees C, and reacted with CHO cells. It was kept at 37 degrees C (CO<sub>2</sub>) and the results observed after 44 hours.

1. Pertussis toxin effect on CHO cells: when the toxicity was high, the cells agglutinated together. When the toxicity was low, cells did not all agglutinate together. Cells that were not in contact with the toxin showed scattered single cell growth. When cells are poisoned by 1/10000 thiomersalate they turn spherical and may affect the results. When cell suspensions are too dense greater than 2 x 10<sup>4</sup>/200 gml it will be difficult to notice any agglutinating. When cell suspensions are less than 5 x 10<sup>3</sup>/200 gml cells will be too far from one another and it will be difficult to clump together. This will also affect the accuracy of the results. A concentration of 1 x 10<sup>4</sup>/200 gml is suitable. At this concentration the highest dilution of the toxin to completely agglutinate the cells is 1 cell pertussis unit (CPU). This unit measurement can be used to determine the content of the various toxin



**Neutralization Reaction of Anti-Pertussis Serum and Varying Concentrations of Toxin**

Key:

1. Rabbit anti-pertussis serum
2. Mice anti-pertussis serum
3. Rabbit anti-LPF IgG
4. Rabbit anti-LPF
5. Human anti-pertussis serum
6. Titration level in neutralization

samples and their toxicity. We compared CHO cells from different origins and 1640, 199 and Eagle's nutrient solution, and obtained the same results, and showed good replicability.

2. We compared CHO cell method and mice white cell proliferation method and the results are shown in the figure. The degree of CHO cell agglutination and the amount of toxin are in direct proportion. The mice white cell proliferation tendency and the degree of CHO cell agglutination are the same. However, the sensitivity of the CHO cell method was 4 to 16 times higher than that of the mice method. Therefore, when testing for small amounts of toxin sample, CHO cells are significantly superior.

3. Rabbit immunoserum anti-toxic neutralization test results showed that as the antibody concentration was lowered and the neutralization ability decreased, it would be suitable to add 4 CPU in the testing of serum antibodies. The mice immunoassay specificity is dependent on the use of highly pure toxin. CHO cell method does not depend on highly pure toxin. See figure.

CHO cells on micro-plates were used to study sensitivity and specificity of pertussis toxin and its antibodies and found them to be good. Because this method is simple and does not need to use animals, it is beneficial to use in terms of economics as well as time.

#### Comparison of the Determination of Pertussis Toxin Using LPF Mice Method and CHO Cell Method

Pertussis LPF	Method		
Protein (gm/ml)	Mice LPU	CHO aggl.	Cell CPU
68	2.9	4	16
34	1.2	4	8
17	0.4	4	4
8.5	0.17	4	2
4.2	0	4	1
2.1	0	3	0.5
1.0	0	2	0.25
0.5	0	1	0.13
0.2	0	0	0.06
NS	0	0	0
199	0	0	0

4: complete agglutination 3-1: partial agglutination

0: no agglutination

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#### Study of Vibrio Cholerae Monoclonal Antibodies

54004130a Beijing ZHONGHUA WEISHENGWUXUE HE MIANYIXUE ZAZHI [CHINESE JOURNAL OF MICROBIOLOGY AND IMMUNOLOGY] in Chinese Vol 7 No 1, Feb 87 p 50

[Article by Wu Qingxuan [0702 3237 3872], Wu Yifang [0702 2128 5364], Cheng Zhengyang [6185 2973], Qi Zhongtian [2058 0022 3944], Cai Yinggang [5591 3601 0474], Yang Rongfang [2799 5554 5364], Xu Zhijin [6079 1807 6930], Tian Jinghui [3944 0079 1979], Ma Ming [7456 5551], and Dao Ping [2629 1627]]

[Text] We heated the classic vibrio cholerae (Ogawa) 15135 strain at 100 degrees C for 2 hours and used the antigen obtained to immunize BALB/c mice. Spleen cells were then obtained to combine with mice myeloma cells SP2/0. Twelve hybrid tumor cell systems were obtained. The McAb secreted by these 12 strains of hybrid tumor cells showed different titer levels with vibrio cholerae (Ogawa) (from 1:40 to 1:1280), strain number 4 was 1:1280, which was 2 to 4 times higher than corresponding polyclonal antibody agglutination titer (1:320 to 1:640). All 12 strains vibrio cholerae McAb showed an agglutination titer of less than 1:40 with 9 non-agglutinating (NAG) intestinal bacteria including typhoid bacilli, paratyphoid A, paratyphoid B, Shigella flexneri, Shigella sonnei, colibacillus, proteus, and Pseudomonas aeruginosa. From these was selected one with the highest sensitivity and the strongest specificity McAB“C<sub>6</sub>Ab(IgG<sub>1</sub>)” and 4 indicator antibodies were produced: Cochlearia officinalis peroxidase (HRP-McAb), fluorescent isothiocyanate (FITC-McAb), Adenine orange (AO-McAb) and Staphylococcus protein A (SPA-McAb). In determining the sensitivity of the vibrio cholerae, the “C<sub>6</sub>Ab” indicators showed the following results with different concentrations of vibrio cholerae in

terms of positive numbers of vibrio; the direct enzyme indicator method was more than  $10^4$ /ml, the fluorescent indirect indicator method was more than  $10^3$ /ml, the DCIFBC method was more than  $10^2$ /ml, and the SPA-COA method was more than  $10^5$ /ml. The sensitivity in descending order was DCIFBC method is greater than fluorescent indirect indicator method is greater than enzyme direct indicator method is greater than SPA-COA method. (1) In cross-testing of the indicator antibodies with 11 intestinal bacteria, enzyme indicator "C<sub>6</sub>Ab" had ++ to +++ positive staining reaction with 10 strains of vibrio cholerae; and had weak positive reaction at varying degrees with 11 strains that were not vibrio cholerae. However, the positive control (PBS) also had plus or minus to ++ weak positive reaction. This may be because the samples contained intrinsic enzymes and produced the non-specific reactions. (2) The fluorescent indirect method showed +++ fluorescent staining reaction with the vibrio cholerae strains, and "plus or minus to +" cross fluorescent reaction with NAG, colibacilli and other like bacteria. (3) In the DCIFBC method, vibrio cholerae all stained to "++++" fluorescent bacteria groups, NAG, colibacilli and Staphylococci did not stain to fluorescent bacteria groups. (4) SPA-COA testing showed vibrio cholerae as positive. NAG and like bacteria showed "- to plus or minus" reaction. When mock samples of stool containing vibrio cholerae were put to rapid testing, the results showed that the samples contain 10 vibrios/ml. After allowing 4 to 6 hours for the vibrios to multiply, the enzyme indicator McAb showed a 90 percent positive result; the immunofluorescent indirect method and DCIFBC both showed a 100 percent positive result; the SPA-COA method only showed a 50 percent to 60 percent sensitivity and was less optimal than the other three methods. In comparison studies, when McAb was marked with the four kinds of indicators, the corresponding rapid testing of vibrio cholerae showed a much higher sensitivity than polyclonal antibody indicators. After testing mock samples of stool containing vibrio cholerae, it was clear that the sensitivity and specificity of the McAb's of vibrio cholerae were generally better than polyclonal antibodies.

12996/09599

#### **Actions For Prevention of Epidemic Diseases Summarized**

**AIDS Prevention Actions Summarized**  
54001002 Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY] in Chinese 22 Jul 87 p 1

[Article by Correspondent Tang Shifen [0781 1102 5358]; "Minister of Public Health Chen Minzhang [7115 2404 4545] and Others Note, In Replying to Correspondent's Questions, That AIDS Virus Has Invaded China; Prevention Work Not To Be Underestimated"]

[Excerpts] Question: What is the situation in China, and what protective measures have been adopted?

Answer: China has now been invaded by the AIDS virus. In June 1985, an American tourist suffering from AIDS died in Beijing. This was the first case. Subsequently four other alien victims were discovered one after another. Recently, a case was discovered among a foreign tourist group in Kunming. Additionally, in 1986, four persons were detected in Zhejiang Province who had contracted AIDS from "Factor VIII" in blood products imported into China. This shows that the AIDS virus will be a threat to China.

The government and the Ministry of Public Health have been extremely attentive to AIDS prevention work. In 1986, the Ministry of Public Health formally made AIDS a contagious disease according to law, and publicized it so that the public would understand the harm caused by AIDS and how it was transmitted, the better to guard against the intrusion of this disease and to lay a foundation for the elimination of unwarranted fears. During the past few years, the country's Ministry of Public Health has placed the emphasis of AIDS prevention work on preventing its transmission from outside the country, strengthening quarantine functions at entry points. In September 1984 and in August 1985, the Ministry of Public Health and units concerned issued notices limiting and proscribing the importation of blood products from abroad, and notified all pharmaceutical and health organizations throughout the country to strictly prohibit use of foreign blood products that had already been imported, and to institute a system for monitoring foreigners entering China. At the same time, in view of the efficacy of some traditional Chinese medicines in the treatment of virus infections and their role in being able to improve immunity, some units also launched relevant research work. In addition, the Ministry of Public Health is currently in the process of actively drafting an "AIDS Control Law," which will put this disease under legal control.

Question: What problems exist today in China's work to prevent the incursion of AIDS?

Answer: Eighty percent of China's population lives in rural villages where conditions for widespread AIDS contagion do not exist. Nevertheless, China has a huge population, and should AIDS spread, it would pose a tremendous threat. In addition, some possibility of pathological contagion exists. Therefore, adequate attention must be given to the difficulty of prevention work. The main problems existing today in our prevention work are as follows:

Some areas and some units either have on hand or are using foreign blood products imported during the past several years. Recently, epidemic prevention units of the Ministry of Public Health found AIDS antibodies in gamma globulin held by certain medical units. Reportedly, though this gamma globulin has been locked up, it has yet to be destroyed.

China's AIDS monitoring network is not as sound as it should be, and methods for monitoring people who bring blood products into China or those infected with AIDS are not well developed. In addition, for economic and technical reasons, no large scale surveys have been carried out.

It is still not possible for medical organizations to use one-time plastic syringes and needles, yet sterilization of glass syringes and needles that can be used over and over may not prevent the transmission of viruses. Finally, Chen Minzhang and the others issued a warning against changes in the sexuality and morality of young people that have come to China in recent years saying that this is a dangerous route for the invasion of AIDS.

**Danger of Epidemic Disease Outbreaks**  
54001002 Beijing BEIJING KEJIBAO in Chinese  
8 Jul 87 p 1

[Article by Correspondent Chen Zhiqiang [7115 1807 1730]: "Danger of Outbreaks of Epidemic Diseases Continues To Exist, Vice Minister of Public Health He Jiesheng [0149 3954 3932] Reminds"]

[Text] At a recent meeting, Vice Minister of Public Health He Jiesheng reminded everyone that the danger of outbreaks of acute infectious diseases continues to exist. There must be a genuine intensification of publicity regarding health to heighten the public's ability to ward off disease and remain healthy.

During 1987 there has been a decline in the incidence of acute infectious diseases throughout the country, and the decline in infectious diseases attributable to planned immunizations, in particular, has been substantial. As a result of efforts by all jurisdictions to intensify rat extermination and perform monitoring work, there has been a substantial decrease in the incidence of hemorrhagic fever during 1987 as compared with 1986. Nevertheless, there are some serious dangers, and the substantial area affected by infectious diseases shows a tendency toward marked increase. The number of cases of hepatitis throughout the country was 43 percent higher during the first half of 1987 than for the same period in 1986, and in some areas infection was rapid and severe. The number of rabies cases increased 38 percent, and the number of typhoid and paratyphoid fever cases rose 30 percent. During the first half of 1987, there was some poliomyelitis infection, the number of cases increasing 15 percent over the same period in 1986.

Vice Minister He Weisheng said we are now in the season for summertime intestinal and insect-borne contagious diseases. Meteorological units have forecast a possible abnormal change in the weather during 1987, so health units in all jurisdictions should heighten vigilance, give close attention to the epidemic disease situation and the trend of its development in their own and neighboring areas, and take effective preventive actions

promptly. They should stir action in all quarters, and use various media including newspapers, broadcasts, motion pictures, television, blackboard newspapers and propaganda galleries to provide the public with information about guarding against diseases and protecting their health. They should mobilize the public to combat its own unsanitary and crude habits as well as actions that violate health regulations.

**Guangdong Acts To Prevent AIDS**  
54001002 Beijing PEOPLE'S DAILY [OVERSEAS EDITION] in Chinese 19 Sep 87 p 4

[Article from Zhongxinshe, Guangzhou 18 Sep: "Guangdong Intensifies AIDS Prevention"]

[Text] In mid-September, Guangzhou City began to show video tapes on AIDS prevention in public places throughout the city such as libraries.

Guangdong epidemic prevention authorities announced a few days ago that in view of the likelihood that AIDS will spread to all countries and regions in Asia, and in view of the geographic location of Guangdong Province, further work in the prevention of such diseases is particularly important.

In the winter of 1985, Guangdong Province began monitoring AIDS, but except for one case during 1986 when antibody tests were positive (for a foreigner), no AIDS cases have come to notice.

In order to intensify prevention, in addition to showing videotapes to provide information about disease prevention, beginning this year epidemic prevention units plan to expand serological testing of key people such as those clinically diagnosed as having low immunity, hemophiliacs (particularly those who have used imported Factor VIII), and blood donors. In addition, it is preparing to print large numbers of small booklets, publications, and leaflets for dissemination everywhere. It also plans to set up research laboratories to conduct research on the epidemiology, pathology and clinical diagnosis of AIDS. It will also cooperate internationally with with countries and areas concerned to launch scientific research.

**Four AIDS Victims Found in Zhejiang**  
54001002 Beijing GUANGMING RIBAO in Chinese  
5 Jul 87 p 1

[Article by Reporter Wan Runlong [8001 3387 7893] and Correspondent Zhu Guoxian [2512 0948 6343]: "Four Contract AIDS Virus in Zhejiang; Authorities Concerned Call For Care in the Use of Imported Blood Products"]

[Text] The reporters recently learned of the discovery in Zhejiang of four people infected with the AIDS virus, three of them children. All four of those infected with the AIDS virus were hemophiliacs who had been injected in October 1982 with imported Factor VIII blood products.

Authorities concerned in the Ministry of Public Health and the Zhejiang Provincial Department of Health have consequently called for care in the use of imported blood products.

Reportedly, the imported Factor VIII had been separated from the mixed blood of between 2,000 and 20,000 blood donors. Zhejiang Medical College and the Virus Research Institute of the Chinese Preventive Medicine Academy are working together with 18 hemophiliacs who have been injected with concentrated Factor VIII. They have used three different tests to confirm that it was the VIII factor that caused the four hemophiliacs to contract the AIDS virus.

The four who contracted the AIDS virus in Zhejiang have received appropriate treatment, and their relatives and contacts are also under custody of health and epidemic prevention units.

9432

#### Measures To Prevent, Treat Viral Diseases, AIDS

**Chinese Medicine to Treat AIDS**  
54001001 Beijing GUANGMING RIBAO in Chinese 20 Aug 87 p 2

[Article by Lu Zhijun [7627 0037 0193], Executive Chairman, Federation of World Institutes of Acupuncture and Moxibustion, and Director of Chinese Institute of Acupuncture and Moxibustion: "Organize With All Possible Speed Research in the Use of Chinese Traditional Medicine To Prevent and Control AIDS"]

[Text] AIDS is a pernicious communicable disease newly discovered in 1980 that spreads quickly and results in an extremely high death rate. Within 2 years, the death rate reached 70 percent, and within 3 years it reached 80 percent. The disease, which has been termed "super cancer," and the "20th Century Black Death," now poses a serious threat to mankind's survival.

Incomplete statistics show outbreaks of AIDS in the Americas, Europe, Africa, Oceania and Asia. As of the first half of 1987, more than 50,000 AIDS victims had been diagnosed in more than 90 countries of the world, and it is estimated that there are 100,000 victims throughout the world. In China too, evidence of AIDS incursion has also been found. An Argentine tourist died of AIDS in Beijing; an American business manager in Beijing was found to carry the AIDS virus; and in Zhejiang, four people who received injections of Factor VIII preparation, an American blood product, contracted the AIDS virus. This shows that the health of the Chinese people has been threatened by AIDS, and that the medical field is facing a severe test and challenge.

As yet no method for preventing or treating AIDS has been found. The AZT that is used in the United States inhibits the reproduction of the virus, but it has serious

side effects. China's several thousand years old traditional medicine has glorious achievements in the prevention and treatment of diseases from abroad (such as smallpox and syphilis). For example, Chinese traditional medicine-invented "variolation technique," spread to foreign countries to make an important contribution to mankind's final eradication of smallpox. In the treatment of communicable diseases such as Type B encephalitis, infantile viral pneumonia, and epidemic hemorrhagic fever, Chinese traditional medicine has achieved substantial results. These achievements show that Chinese traditional medicine holds enormous potential for the diagnosis and treatment of acute communicable diseases.

AIDS is a human body immune-deficiency disease caused by the AIDS virus that is, clinically speaking in traditional Chinese medical terms, in the category of a disease caused by the dampness factor. Use of Chinese traditional medicine to prevent it and to treat it completely will likely be effective. This is because the role of Chinese herbal remedies, acupuncture and moxibustion, and breathing regimens in improving organic immunity has been confirmed, and results have been scored by Chinese traditional medicine in the treatment of virus diseases such as herpes, and Type B hepatitis. In addition, successful experiences in the treatment of leukemia, aplastic anemia [0375 7140], and cancer patients with Chinese traditional medicine also provide useful lessons that may be drawn on. Complete treatment and preliminary estimates can achieve two goals as follows: One is elimination of the patient's symptoms; the other is the lengthening of the victim's life. With good treatment, this disease can be properly controlled. Therefore, active efforts must be made to explore ways in which Chinese traditional medicine can prevent and control AIDS, so that Chinese traditional medicine can make another contribution to mankind.

I suggest the following:

1. The coalescence of medical research forces within the country, Chinese medical research institutes taking the lead under the auspices of the Ministry of Public Health to establish a team of experts in the fields of Chinese medicine, western study of Chinese medicine, acupuncture and moxibustion breathing regimens, immunization, and viruses for the thoroughgoing research into and the organization of cooperation for the prevention and treatment of AIDS.
2. Rapid expansion of pertinent prevention work, exercising strict control over the importation into China from abroad of blood and biological products. Blood products that have already been imported may be used only after testing and approval by health and epidemic prevention units. This is necessary in order to cut the avenues by which AIDS is transmitted.

3. Strengthening scientific and technical exchanges and cooperation with foreign countries. Since AIDS is a pernicious communicable disease affecting the whole world, global cooperation is needed for its prevention and treatment. Currently, there are no definitely diagnosed cases inside China, and no foundation exists for the development of AIDS research. This makes the strengthening of cooperation with foreign countries all the more necessary. Government-to-government scientific and technical cooperation, nongovernmental organizations and academic bodies, and academic exchanges may be used to launch research in the prevention and treatment of aids.

**Immunodeficiency Virus Testing Procedures**  
*54001001 Beijing ZHONGHUA YIXUE ZAZHI /NATIONAL MEDICAL JOURNAL OF CHINA/ in Chinese Vol 67 No 8, Aug 87 p 469*

[Article by Fan Jiang [5400 3068], Virology Institute, Chinese Academy of Preventive Medicine; Yu Sishu [0060 1869 1659], Fujian Provincial Health and Epidemic Prevention Station; Yan Yansheng [0917 1693 3932], Fujian Provincial Health and Epidemic Prevention Station; Zheng Xiwen [6774 6932 2429], Contagious Diseases Research Institute, Chinese Academy of Preventive Medicine; Wang Aixia [3769 1947 7209], Beijing Xiehe Hospital; Xing Yulan [6717 3768 5695], Beijing Municipal Health and Epidemic Prevention Station; Shi Licheng [4258 4539 2052], Virology Institute, Chinese Academy of Preventive Medicine; Wang Bichang [3769 1801 ?], Zhejiang Medical College; and Zeng Yi [2582 3015], Virology Institute, Chinese Academy of Preventive Medicine: "Detection of Human Immunodeficiency Virus in Blood Serum of Chinese AIDS Victim"]

[Text] Human immunodeficiency virus (HIV) is the pathogen for AIDS. Antibodies for that virus can be detected in the blood of more than 95 percent of AIDS patients. We used different serological methods to test for HIV antibodies in a patient suspected of having AIDS. Data about the patient and results of the serological tests for HIV are provided below.

The patient was a 36 year old male from Changde County in Fujian Province who emigrated to Hong Kong in 1976 and later resided in the United States. He had a history of frequenting brothels. In December 1986, he entered hospital because of unexplained fever, lassitude and progressive weight loss over an 11 month period. After entering the hospital, his condition gradually worsened. He suffered from discomfort in the upper abdomen, from nausea with vomiting, and from diarrhea. On 16 February 1987, he developed a high fever and bled from the esophagus. Rescue efforts failed and he died.

Serological methods used to test for HIV in the patient and results obtained were as follows:

1. Enzyme Linked Immunosorbent Assay (ELISA): A Human T Lymphocyte Virus III Enzyme Immune Antibody Kit from Abbott Laboratories (Abbott, HTLV-III EIA Kit) in the United States was used in the prescribed way. In the test results, the negative blood serum control average value (NCX) equaled 0.026; the positive blood serum control average value (PCX) equaled 0.602; the cutoff value equaled 0.086, and the patient's specimen OD values were 1.251 and 1.738, both of them higher than the cut off value, showing positive for HIV antibodies in the blood. In addition, an indirect ELISA method of detection developed by the National Serology Institute in Copenhagen Denmark also showed positive for HIV/IgG blood serum antibodies.

2. Indirect Immunofluorescence Test: A smear was made from an Hq cell strain (from an adult patient suffering from lymphocytic leukemia) that had been infected for one week. After drying at room temperature, it was fixed for 10 minutes in acetone at -20 degrees C. The blood serum was diluted 1:5, and the fluorescent antibodies used were goat anti-man IgG in a conventional operation. Two tests showed positive, indicating that the patient's blood serum contained HIV/IgG antibodies. The cytoplasm was clearly visible under the fluoroscope, and the cell membrane showed jade green fluorescent positive cells.

3. Western Blot Test: An Hq cell that was infected with HIV was used to prepare the virus. Then SDS-polyacrylamide gel electrophoresis (SDS-PAGE) was done on it, and it was electrically transferred to a nitrate cellulose membrane where it was sealed with Cohen's solution to await use. The patient's blood serum was diluted 1:40 and after incubation with the membrane and washing, a staphylococcus A protein-peroxidase compound was added to it and it was incubated again, washed and immunoddyed. The patient's blood serum showed four HIV protein bands of p30, p41, p65 and p76, showing the patient's blood serum contained HIV protein antibodies.

On the basis of the serological test results and the history of the illness, the patient could be diagnosed as having AIDS.

AIDS is a new and deadly contagious disease. Since there are presently no effective drugs for treating it and no reliable immunizations against it, there has been a dramatic increase in the numbers of persons who have contracted it and the number of cases. The AIDS pathogens have been transmitted to China, so we must conduct HIV blood serum antibody testing in order to prevent HIV contagion.

This work is indebted to Comrades Xu Fengmei [1776 7685 5019] of the Beijing Municipal Epidemic Prevention Station, to Shi Zhensheng [2514 2182 5116] and Zhao Lishan [6392 4539 1472] of the Chinese Medical Research Institute, to Sun Xinhua [1327 2450 5478] of the Epidemic Prevention Section of the Ministry of Public Health, and to Qian Weishun [6929 4850 7311] of

the Fujian Provincial Hospital, and to Chen Jinliang [7115 6930 5328] and Zhao Lirong [6392 7787 2837] of the Fujian Provincial Epidemic Prevention Station for their support and cooperation, for which gratitude is hereby expressed.

**New Leukemia Virus in AIDS Family Found in Taiwan**

54001001 Beijing PEOPLE'S DAILY [OVERSEAS EDITION] in Chinese 15 Aug 87 p 5

[Article from Zhongxinshe, Hong Kong: "New Type of Leukemia Virus Discovered in Taiwan"]

[Text] According to a report from Taipei, a survey conducted by authorities concerned in Taiwan has found a new type leukemia virus of the AIDS virus family to be threatening public health in Taiwan. This virus is known as "adult T-cell leukemia virus." This virus is the same kind of fanlu [0646 6922] virus as the AIDS virus, both of which can destroy the cell immunity system. The illness it causes is a terminal one like blood cancer, and there is no cure. Unlike the AIDS virus, which reduces the number of white corpuscles and lowers immunity, this virus causes an increase in white corpuscles leading to what is popularly termed blood cancer. It can be transmitted by body secretions including blood, saliva, and semen, and the incidence rate is vastly greater than for the AIDS virus. Reportedly, it was discovered for the first time in 1980 by American and Japanese medical experts. Central Africa, southern Africa, and the Caribbean Sea area are high infection areas. During 2 years of cooperation with the United States, the Taiwan University Medical Academy and the Taiwan "Chinese Research Institute" surveyed 7,800 people on Taiwan 30 years of age or older, learning that the incidence of this virus is 5 per 1,000. Among the 600 prostitutes surveyed, the incidence reached 5 per 100, or 10 times the rate for the public at large.

The Epidemic Prevention Department of the Taiwan "Executive Yuan" Health Office announced on 11 August that this terminal illness could rock Taiwan, so people must be on guard. The print media are concerned about blood plasma products.

**Traditional Medicine for AIDS in Tanzania**  
54001001 Beijing PEOPLE'S DAILY [OVERSEAS EDITION] in Chinese 24 Oct 87 p 4

[Article by Correspondent Feng Junjun [7458 65121 6511]: "China's Traditional Medicine Challenges AIDS. First Group of Experts Arrives in Tanzania to Demonstrate Skills"]

[Text] China has begun a series of tasks to challenge what has been termed the "super cancer," and the "Number 1 Enemy of Public Health," AIDS.

An AIDS prevention and treatment leadership team headed by the country's Chinese Traditional Medicine Administration director, Hu Ximing [5170 3556 2494] has been established, and the Ministry of Finance has appropriated special funds for this purpose.

AIDS is an immunodeficiency illness affecting the whole body that is caused by AIDS virus infection, and that has spread to five continents of the world. There are, as yet, no effective methods for prevention or treatment. Efforts by Chinese traditional medicine to find effective methods of curing aids are being increasingly watched by international medical circles.

AIDS has not yet become epidemic in China. Nevertheless, those concerned believe that China should make a contribution to the prevention and treatment of AIDS. Consultative and testimonial conferences made up of experts in the field of Chinese traditional medicine, western medicine, a mixture of Chinese and western medicine, and Chinese pharmaceutical experts have been convened. These experts believe that Chinese traditional medicine and pharmacology, with their several thousand years of experience in providing medical treatment and their unique theoretical systems, which have scored major breakthroughs in the treatment of pernicious infectious diseases from abroad such as smallpox, and which have scored very good results in the treatment of diseases caused by viral infections and immunodiseases, have accumulated a great amount of experience. They have also discovered a large number of Chinese herbs and prescriptions for improving and regulating immunity, and they also have many treatment methods including acupuncture, moxibustion, and breathing regimens that may be drawn on. Thus, traditional Chinese medicine holds a substantial potential and feasibility for treating AIDS.

As one of Chinese traditional medicine's first actions in exploring AIDS treatment, the country's Chinese Traditional Medicine Administration has signed a formal agreement with Tanzania on the trial treatment of AIDS, and the first group of experts in Chinese traditional medicine has left for Tanzania.

**Hemorrhagic Fever Virus Found in Dogs**  
54001001 Beijing BEIJING KEJIBAO in Chinese  
20 May 87 p 4

[Article by Wang Hui [3769 1979] excerpted from KEJI XINXIBAO [SCIENCE AND TECHNOLOGY NEWS], 27 Apr 87: "Contagious Hemorrhagic Fever Virus Found in Dogs For First Time in Nanjing"]

[Text] During the course of their research, research personnel at the Military Research Institute of the Nanjing Military Region Logistics Department have discovered contagious hemorrhagic fever virus in dogs. China's noted contagious disease expert, Wu Guanghua [0702

0342 5478] said that this was the first such discovery either in China or abroad, and that it holds major significance for the prevention of contagious hemorrhagic fever.

Contagious hemorrhagic fever is a disease with a high death rate that is widespread throughout China. Researchers at the institute began research on the treatment of this disease during the 1960's. Now they have separated two strains of contagious hemorrhagic fever from dogs lungs, demonstrating that not only are rats the principal source of contagion for this disease but that dogs also have a connection to this disease. The researchers conducted on-site surveys in areas having a high incidence of contagious hemorrhagic fever, namely among 1,136 households in 36 villages of Donghai County in Jiangsu Province. They discovered the incidence of hemorrhagic fever among households having dogs to be 3.7 times again as great as among those without dogs, and the recessive infection rate to be 2.7 times again as great as for households not having dogs.

9432

**Epidemic of Spirochetosis Reported**  
40101003 Beijing CHINA DAILY in English  
13 Oct 87 p 3

[Text] More than 60 people have died in Sichuan Province of spirochetosis, an acute infectious disease. They were among 30,000 people in 17 counties in the province who contracted the disease this spring.

/06091

**Cases of Leprosy Drop**  
40101005a Beijing CHINA DAILY in English  
4 Dec 87 p 3

[Text] Kunming (Xinhua)—The number of leprosy patients in China has dropped from 150,000 in 1981 to the present 70,000, thanks to nationally co-ordinated efforts.

This was disclosed at the Third National Symposium on the Fight Against Leprosy which closed here earlier this week.

China hopes to eradicate leprosy by the end of this century, Xinhua reported yesterday.

To attain this goal, the country has established additional specialized organizations and research institutes, and trained more professionals over the past six years, said Dr Ma Haide (George Hatem), adviser to the Public Health Ministry, who chaired the symposium.

The present achievements indicate that China will be able to eradicate the remaining 70,000 cases by 2000 or even earlier, according to the US-born doctor who has helped China combat the disease for decades.

China had about 500,000 leprosy patients in 1949 when the People's Republic was founded.

Chinese doctors have made breakthroughs in early diagnosis, shortening the recovery period and improving medical treatment, he said.

/06091

**AIDS Virus Isolated**

54001003 Beijing RENMIN RIBAO [OVERSEAS EDITION] in Chinese 8 Nov 87 p 4

[Summary] According to the Institute of Virology, Chinese Academy of Preventive Medicine, AIDS virus isolated from the blood of a foreign AIDS patient was verified through testing with specific anti-serum. Further proof was obtained after testing the virus in AIDS-sensitive leukemia cells. The isolation of AIDS virus provides significant information for diagnosis, prevention, and treatment of AIDS.

/06091

**Fight Against AIDS Shows Progress**

40101005b Beijing CHINA DAILY in English  
7 Dec 87 p 3

[Article by Li Huahong]

[Text] Hangzhou—Efforts to combat Aids are showing some success in this city in Zhejiang Province, where mainland China's only four Aids virus-infected people have been found.

"We are taking every possible measure to prevent the spread of the virus," Dai Di, head of the Zhejiang Province's Public Health Bureau, told China Daily on Saturday after he met a Japanese expert Takashi Kuri-mura, consultant for the World Health Organization in the West Pacific region.

None of the four Aids virus carriers, who are under close medical attention, has become an Aids victim, Dai said. But he revealed that one of them, a 13-year-old boy who was a haemophilia patient like the other three, died last February.

The child died from a cerebral haemorrhage, he added.

The provincial Aids prevention work group, set up a year ago, has done "a huge amount of work" to mobilize and co-ordinate efforts to take care of these Aids virus carriers, Dai said.

An official from the group said the group kept in frequent touch with the families of the patients, who are all children with the exception of a man in his late 20s.

The group told them how to avoid contaminating themselves as well as others, and persuaded them to only send the patients to a designated hospital where their identities are known only to a few doctors.

To protect them from psychological attack, the patients themselves were not told of their real situation, he said.

The official added that the group also arranged general health checks while treating them with traditional Chinese medicines.

"The patients say they are feeling better. But there are no changes observed in clinical data," he said.

The four carriers were infected by an imported blood product needed in haemophilia treatment, Dai said.

The Armour Corporation of the United States donated a batch of blood products to the Zhejiang Medical Society in 1982 which used them in 1984 only to find in a later test that the four recipients were Aids carriers.

/06091

#### **Education on VD Urged**

40101006a Beijing CHINA DAILY in English  
10 Dec 87 p 3

[Text] Venereal disease experts are calling for mass education, especially among young people, to prevent and treat the disease in China.

Most VD patients in China are between 20 and 30. They usually have high annual incomes but do not understand the dangers of the sexually-transmitted diseases, People's Daily reported yesterday.

China announced it had basically wiped out VD on the mainland in 1964, after 15 years of effort to control the diseases, which were widespread before 1949.

The re-emergence is caused by the influx of foreign tourists and businessmen and by promiscuous behaviour of the Chinese, according to the paper. It did not mention the number of VD patients.

The National Consultative Committee for Sexually Transmitted Diseases Control and Research is holding a symposium in Nanjing. Experts there said people should learn about the harm caused by VD and about preventative methods. Middle school and college students should be given courses.

The training of medical personnel in diagnosis, treatment and prevention of VD is as important as re-establishing a surveillance network for VD control, according to the experts.

Many medical workers lack the knowledge to diagnose these diseases since the country eliminated VD hospitals and research institutes and such courses in medical colleges during the late 1960s.

The government set up 16 VD surveillance stations in coastal cities and regions such as Guangzhou and Shanghai over the past two years. In July 1986, a centre for sexually transmitted diseases control and research was founded in Nanjing. (CD News)

/06091

#### **Snail Fever Hits More Victims**

40101006b Beijing CHINA DAILY in English  
11 Dec 87 p 3

[Text] Snail fever, claimed to have been wiped out in most parts of China about 30 years ago, is making a comeback in South China.

The resurgence is blamed on looser controls on top of increased economic activities in the countryside, especially in the lake districts, Minister of Public Health Chen Minzhang told China Daily yesterday.

The disease has affected about 100 counties, cities or prefectures in nine provinces, and autonomous regions. About 16 million people in Hubei and Hunan provinces are affected.

Snail fever is caused by parasitic flukes which live on a species of freshwater snail. They can get into people's blood streams through the skin in seconds, and lead to anaemia, inflammation, dysentery, cirrhosis of the liver, and sometimes death.

Nowadays, large swamplands have been divided into small plots mainly in the care of individual farmers who are also responsible for irrigation canals, ditches and reed marshes, where the snails live.

Chen said the spread of the fever is also due to increased contact with the blood flukes in the water during fishing and farming.

Sun Zhonggui had a family of 19 members 10 years ago, but now the old woman is left alone in Jiangling County of Hubei Province. Snail fever killed her entire family, including her husband, and four sons, People's Daily said.

In Qiyuan Village in Jiangling County, eight young mothers have been widowed by the disease since 1984. In Xiantao, 75 per cent of the pupils in Xinjiang Primary School have been stricken.

Heping Village in Qianjiang County has 225 families, among which all 420 able-bodied men and women are suffering from the disease. The lack of labour forces victims to keep working in waters where there are flukes.

The disease, also called schistosomiasis, has plagued the country for more than 2,000 years. An ancient body unearthed in Jiangling in 1981 was a snail fever victim.

China has cured more than 11 million patients, or 95 per cent of all the victims of the disease since 1949. But the toughest nut—the lake districts of Hubei and Hunan provinces—was not cracked.

"For a long time, we heard reports only about the achievements, but little about the problems," the paper said.

Snail fever experts at a symposium last month in Wuhan, the capital of Hubei Province, said the control plan must be supported by the departments of water conservancy, agriculture and even light industry.

Effective pesticides to kill the snails should be developed, they said, and better trained medical personnel are needed.

/06091

## CONGO

### AIDS Figures Reported 1983-1987

01120642 Dakar PANA in French 1435 GMT 10 Dec 87

[Text] Brazzaville, 10 Dec (ACI/PANA)—Sixty thousand cases of AIDS carriers were reported in Congo from 1983 to 1987, a report from the National Anti-AIDS Committee (CNLS) disclosed. The report, which was presented on Wednesday [9 December] by Dr Itoua Ngapiro, chairman of the CNLS while opening the national symposium on AIDS, further said that 1250 AIDS infected persons developed the disease with a 50 percent death rate. An average of 6 Congolese out of 100 infected with the virus die of the disease, the same document says.

The spread of the disease in Congo is said to be 3,000 cases per year with an increase in urban centers such as Brazzaville, Pointe-Noire, Loubomo, Nkayi, and Ouezzo where prostitutes, the main victims, represent the most important percentage of AIDS victims. [passage omitted]

## CUBA

### Anti-AIDS Program Update

12192353 Havana International Service  
in Spanish 0000 GMT 18 Dec 87 PA

[Summary] In 1988, Cuba will become one of a few countries with an effective AIDS detection system. The Cuban Ministry of Public Health is prepared to test 7 million people out of a total population of more than 10 million. Up to 30 November, 168 AIDS virus carriers were detected in the country. Of this number, 19 are in various stages of the disease and five have died.

5212

## EGYPT

### ROK To Provide Egypt With Medical, Technology Assistance

54004600 Cairo MENA in Arabic 0955 GMT 24 Dec 87

[Text] Cairo, 24 Dec (MENA)—An official at the Ministry of International Cooperation today said that the ROK Government has agreed to provide Egypt with an annual grant of up to \$5 million in medicines to treat bilharzia patients in the Egyptian countryside.

The ministry, the official said, has initiated contacts with the ROK Government in order to establish joint economic cooperation. Seoul has agreed to provide Egypt with Grants, free feasibility studies, and experts in technology transfer.

The official said that, despite the modest finances available to the Korean Economic Cooperation Fund, the ROK Government is examining the possibility of providing soft loans to finance some of the 5-year social and economic development projects.

00729/7310

## FEDERAL REPUBLIC OF GERMANY

### Health Senator Discusses Berlin AIDS Situation

54002438c Berlin TAGESSPIEGEL in German  
2 Dec 87 p18

Fifty male and female prostitutes have taken advantage of the special AIDS program sponsored by the Berlin Senate and the Land labor office. This is what health senator Ulf Fink reported during a lecture at the Urania community education center. Fink referred to the fact that, in Berlin, AIDS self-help groups will be funded by 2 million DM and that the transfer to regular funding is now assured. The senate began supporting self-help groups two years ago, with DM 125,000. By June, said Fink, 236 AIDS cases had been identified in Berlin. In about 100 cases, the affected individuals have already died. As part of the Berlin senate's special program, 100 ABM [expansion unknown] positions have been created. The goal is to help women get out of prostitution.

The health senator emphasized that the Berlin senate was avoiding compulsory measures and was relying on education and trust. The anti-AIDS measures must 'be aimed at the 99.9 per cent who are reasonable', said Fink.

According to an Emnid poll in Berlin, one third of young citizens under 30 have changed their sexual behavior, as have a full 90 per cent of homosexuals. The number of AIDS cases, however, will grow next year, because many

people have already been infected during the past few years. Fink said that 'The best we can currently hope for is a leveling off of the rate of growth'.

The leader of the senate AIDS Task Force, Professor Bienzle of the Landesinstitute for tropical medicine, explained that the subject of AIDS in the workplace, with the accompanying danger of discrimination by co-workers and supervisors, will become more important very soon. Bienzle regards proposals to use statistics to better understand the epidemic's spread, perhaps through imposition of a micro-census or through analysis of blood tests taken from accident victims who represent a statistical cross section of the population, as possible legal provisos. The voluntary nature and the anonymity of all blood tests are critical, said Bienzle. They could not be taken from unconscious accident victims. Besides, statisticians have assured him that the current, anonymous, required laboratory reporting is sufficient to gain a picture of the spread.

**4 of 477 Test Positive for AIDS at Munich Health Institute**  
*54002438b Munich SUEDDEUTSCHE ZEITUNG in German 15 Dec 87 p 13*

In November, 477 people took an HIV antibodies test at the anonymous AIDS health institute on Dachau Street. Four of those tested proved to be HIV-positive. As part of regular venereal disease monitoring, 290 male and female prostitutes were tested. All of these tested negative. The public health office further wrote in its November AIDS report: of people applying for civil service employment, 45 were tested, with consistently negative results; among those foreigners applying for visas or asylum, 453 were tested - all negative. By order of the public health authority, 20 people suspected of infection with AIDS came to a 'medical consultation', and four of them were tested for the HI Virus. The tests came out negative in these cases. Compulsory measures were not necessary, according to the health authorities, since the affected persons voluntarily answered the summons to the 'medical consultations'.

**14,000 AIDS Infections Reported in the FRG**  
*54002438a Munich SUEDDEUTSCHE ZEITUNG in German 18 Dec 87 p 2*

According to anonymous data from a testing laboratory, approximately 14,500 cases of infection with the deadly immune deficiency disease, AIDS, have been reported in the Federal Republic. The disease has manifested itself in about 1500 people, and half of those have already died, said the federal minister of health, Rita Süssmuth (CDU) to the Cologne newspaper, EXPRESS. The national AIDS council has requested that the federal government further expand the anti-AIDS program for drug addicts. Considering the percentage of undetected cases, scientific estimates indicate that 30,000 to 100,000 people are probably infected with AIDS in the

Federal Republic, said Mrs. Süssmuth. An inter-ministerial working group is presently investigating whether candidates for civil service positions should in the future be required to present a medical certificate of a negative AIDS test. The minister, however, spoke against this proposal.

**FRANCE**

**First Rabies Fatality in Country for 60 Years**  
*02171629 Paris AFP in English 1621 GMT 17 Dec 87*

[Text] PARIS, Dec 17 (AFP)—The mayor of a small commune in the French Alps died of rabies earlier this month, the first victim known to have contracted the disease in France for almost 60 years, according to the Pasteur Institute in Lyons.

If the report is confirmed, Jean Devance, mayor of the village of Moye, in the Haute Savoie, would be the first known fatality from rabies in France since 1928.

However the Pasteur Institute in Paris, where tests were still in progress, refused Thursday to confirm the diagnosis.

The director of the Rabies Unit, Pierre Sureau, said he was reserving his judgement on the cause of Mr. Devance's death until tests were completed.

However the announcement by the institute in Lyons has caused a shock reaction in the Haute Savoie, where doctors are meeting a sharp increase in the demand for vaccination against rabies.

Rabies, eliminated at the end of the 1920s, reappeared in France in 1968 in the regions bordering West Germany. The virus has spread throughout east and northeast France, and cases have been reported in the Paris region.

Some 40,000 cases of animals infected by rabies have been recorded since 1968.

About 10 people have died in France since 1968 after contracting the disease abroad. In 1979 a man died following a corneal transplant from a donor who had been infected outside France.

**GREECE**

**Statistics on AIDS Victims, Deaths**  
*54002413a Athens ETHNOS in Greek 5 Oct 87 p 9*

[Article by Art. Domenicu: "AIDS: The Number of Victims Has Reached 38"]

[Text] Last month in an Athenian hospital died the first woman, victim of AIDS, in Greece.

The first symptoms—death signs of the terrible disease—already have made their appearance in 10 patients who are carrying the virus.

The above new information on the evolution of AIDS in our country was made public by Ms Theodora Stephanou, director of hygiene of the Ministry of Health, during the 2-day seminar on AIDS organized by the National Committee on AIDS (EES).

According to Ms Stephanou:

1. Out of the 68 AIDS cases identified up to now, 40 were homosexuals, 2 were drug addicts, and 3 were women; and
2. 38 individuals out of the above group have already succumbed to the disease.

The woman who died recently of AIDS was an ex-callgirl.

#### Battle with Death

The tragic victim had retired from her old profession in 1982 and subsequently entered into matrimony. Five years later, after struggling for months against death, she succumbed, in her bed of suffering, after having experienced the most excruciating, unbearably painful moments of her life.

The speaker also referred to three targets of the Ministry of Health: a) informing the public, b) creating the necessary laboratory and clinical infrastructure for fighting against the disease, and c) taking measures for checking the disease: blood samples from a random population group, defining the functions of the National Committee on AIDS, etc.

Measures are also taken for the creation of external clinical facilities, for the treatment exclusively of persons who are either AIDS patients, or carriers of the AIDS virus, in two large clinical units—one in Athens and one in Salonica. Out-patient treatment will be given in the above units to patients and virus-carriers along with the scheduling of their parallel treatment at home.

13373/12223

#### Spread of Hemorrhagic Fever Feared

54002413b Athens I VRADYNI in Greek 24 Oct 87 p 5

[Article: "Farmers and Tree-Fellers Most Vulnerable to the Virus"; first paragraph is I VRADYNI introduction]

[Text] Salonica, Saturday—The "imported" hemorrhagic fever which is transmitted to humans through rodents and especially rats, is spreading in other areas as well. The Microbiology Laboratory of the Faculty of Medicine of the University of Salonica reported that during the past 5 years, 60 cases were identified in Macedonia while two additional cases were discovered in Aetoloakarnania.

It was established by the laboratory of Microbiology of the Faculty of Medicine of the Aristotelian University of Salonica that those infected by the virus are primarily farmers, tree-fellers, and generally village stock.

The above named laboratory has been studying the virus since 1980. The research is financed by Yale University and other U.S. universities.

Papapanagiotou, professor of microbiology and director of the laboratory, said: discussing the subject, which assumes new dimensions after the death of seven infected persons in the Ioannina region, Mr John. "Hemorrhagic fever, frequently accompanied by kidney syndrome, has been investigated by our laboratory for the past 8 years. In 1982 two persons from the Aridea of Pella region were diagnosed with the disease. To this day, the number has risen to a total of 60 cases.

We must note that in the Ioannina region we had a flare-up of the disease, also during 1983. During that period, eight persons were infected, one of whom has since died of the disease.

"The virus," Mr Papapanagiotou added, "is transmitted to humans by rodents, especially rats. It is transmitted via their bites, their saliva and their urine.

If infection takes place because of saliva, the virus will continue reproducing for the length of a month; in the case of urine, the virus may continue reproducing itself for up to 2 years.

It is not transmitted, however, from person to person, therefore, there is no particular reason for worry.

#### The Virus Carriers

Ioannina—The spraying of groups from the Directorate of Hygiene in the village of Kledonia in Konitsa, continued yesterday as well, within the framework of precautionary measures, aiming at fighting the hemorrhagic fever, which had already as its victim Apostolos Evagheiou, 26 years old.

Parallel efforts already initiated involve the systematic informing of the public on the aspects of the disease, which if not timely diagnosed, can be fatal.

The carrier of hemorrhagic fever is a variety of rats under the scientific name of "andondemus aquarius." These rats have a gray color with a reddish tail and originate in Korea.

In the meantime, residents of the Konitsa region are concerned with the disease and avoid leaving any food items exposed, while at the same time the rat-poison supplies are sold out.

Agrinion—Two additional cases of hemorrhagic fever have been identified in the past in Aetoloakarnania; they were not fatal. Mr Karagounis, MD, discovered, in the course of his research in cooperation with the University of Ioannina and the University of Salonica, that in a total

of 139 cases, two with positive antibodies were identified. In other words, the patients were infected by the virus, but recuperated and neither they, nor any person with whom they come into contact run any risk of infection.

13373/12223

## GUYANA

### Blood Tests in Trinidad Confirm 12 Cases of AIDS Here

54400017 Georgetown GUYANA CHRONICLE in English 29 Oct 87 pp 4-5

[Article by C. Prowell]

[Text] Tests taken by the Ministry of Health during this year have shown twelve positive cases of AIDS in Guyana—all homosexuals.

Dr. Edgar London, epidemiologist, said the victims had gone to the Georgetown Hospital complaining of other illnesses. But after symptoms similar to those of the AIDS virus were found on them, blood samples were taken and sent to Trinidad for testing. The results were positive.

Five of the 12 victims, so far diagnosed, have died and the others were treated and sent home.

Dr. London said he observed that the common symptoms of the AIDS disease are diarrhoea, which lasts for more than four months, loss of weight and a skin condition. He pointed out that the disease is not transmitted by kissing but through the blood.

Also an unborn child can be infected by a mother who has the disease.

In the case of those taking drugs intravenously, the virus can be injected by unsterilised needles, and by the transfusion of infected blood.

Speaking of some of the constraints in dealing with AIDS, Dr. London said the victims are unwilling to name their paramours and admit their homosexuality.

However the Government is seeking assistance from international health agencies to set up the facilities whereby tests can be done here and the necessary treatment administered locally.

Senior Minister in the Ministry of Health, Noel Blackman has advised that persons should either desist from all activities which can cause infection by AIDS virus or use preventatives.

Acquired Immune Deficiency Syndrome (AIDS) destroys the body's defence-mechanism, thereby making the body susceptible to infection by other diseases.

/06091

### Venezuela, Guyana Agree on Joint Health Projects

54400018 Port-of-Spain TRINIDAD GUARDIAN in English 23 Nov 87 p 16

[Text] Georgetown, (AP)—Guyana and Venezuela have agreed to pursue several health projects, a top health official announced Thursday.

Senior Minister of Health Dr Noel Blackman met with Venezuelan Minister of Health Francisco Monte Brunt last week to discuss joint projects in health care, control of malaria, and the exchange of health information and medical technology.

A training programme in bio-medical engineering will be made available for Guyanese students in the Venezuelan capital, Blackman said.

/12223

## INDIA

### Press Reports on Efforts To Halt Encephalitis

#### Cases in South Arcot

54500058 Madras THE HINDU in English 10 Nov 87 p 3

[Text] Tiruchi, Nov. 9—Japanese encephalitis, commonly known as brain fever is threatening to break in an epidemic form in Tiruchi town. The fatal case was reported from Veppakundi, close to the Tollgate on the Tiruchi-Salem road on the outskirts of Tiruchi town. The alarm signal shown at Manachanallur block 7 km from Tiruchirappalli should be taken serious note of by the authorities concerned if the threat is to be contained at the border itself.

The border villages of Veppur, Veppanthattai, T.Palur, Sendurai, Jayamkondam panchayat unions on the South Arcot, Tiruchi borders have been witnessing the resurgence of this fatal virus epidemic for the last four years claiming infants in the age group one to eight. The efforts by the health authorities were only an apology compared to the Gargantuan proportions of preventive and curative measures to tackle this epidemic.

This correspondent drove through the affected Veppur and Veppanthattai blocks up to Labbaikudikadu, the bordering affluent town panchayat, to South Arcot and also the Sendurai and T.Palur unions in Ariyalur revenue division.

The parents of children suffering from brain fever or meningitis narrated their tales of woe—prompt medical relief or preventive measures woefully inadequate in villages affected by the epidemic, and inadequate facilities in the taluk headquarters hospitals in these areas.

Many parents who can afford take their children to private nursing homes, where again the doctors complained the parents brought the children too late for them to do anything.

**No access:** The private and government doctors emphasised that an early detection and meticulous nursing were the two musts to contain the Japanese encephalitis and the villagers had no access to these two factors. As a result, fatal cases were increasing.

Even according to official figures, the total number of confirmed attacks of Japanese encephalitis as on date was 65 of which 25 proved fatal and Labbaikudikadu town panchayat alone claiming 12 lives out of a casualty of 29.

**Fact figures:** According to the figures available with the Collectorate here on Monday the breakup figures of brain fever attack and those fatal are as follows:

Perambalur block: attacks 12, deaths, 2; Andimadam: attacks 2, death 1; Karai village in Alathur block: attacks 3 and death 1; Labbaikudikadu town panchayat: attacks 29 and deaths 12; Manachanallur block: attacks 3, deaths 2; Pudur Uthamanur in Lalgudi block: one attack which proved fatal; Sendurai block: attacks 3, fatal 1; Tirumanur: one attack but not fatal; Veppanthattai block: four fatal; T.Palur: one attack which proved fatal.

Brain fever apart, there were 11 cases of meningitis reported of which three have proved fatal. Visiting the taluk headquarters hospitals in Ariyalur, Jayamkondam, Perambalur, Lalgudi this correspondent found the basic facilities available inadequate to tackle the brain fever the way it was gathering momentum the last 10 days.

**Twice as large:** While the official figures would be an indicator of the Government efforts to organise preventive and control measures, data gathered during the visit to these villages showed that attacks and fatalities must be at least twice the official figures.

Talks with a cross section of the doctors and parents in these towns and villages by this correspondent brought to fore urgent need to press into service a team of four to six paediatricians and not general physicians in each of the taluk headquarters hospitals where the epidemic has surfaced.

This correspondent could find only one paediatrician in Ariyalur who normally was unable to cater to all the regular cases reported.

**Need of the hour:** Top priority must be given to mobilise paediatricians from all the districts and send them to these four or five taluks. Early detection being most important to save a child, every taluk headquarters must have a mobile van to cruise around the villages and neighbouring ones for an exhaustive screening of children.

Doctors speaking to this correspondent said they had no specific drugs and what they did was to treat the symptoms—treatment for fits or fever or both.

**Constraints:** The paediatricians at Tiruchi told this correspondent that the culex mosquitoes (which injected the Japanese encephalitis virus into children) bred both indoors and outdoors. Hence indoor fumigating with BHC-50 per cent to control the culex mosquitoes would have no desired effect.

They wanted the Government to organise massive thermofogging operations in these above mentioned villages on a war footing to annihilate the culex mosquitoes, which would go a long way in reducing the adult mosquito population and breaking the transmission cycle for a fortnight. This would reduce the epidemic period by 15 days, offering enough scope to prevent and control the epidemic.

**A war, a must:** A team of virologists from Madurai under the auspices of an ICMR project have been visiting the Ariyalur-Perambalur belt frequently to take blood and fluid samples from the spinal cord for research to determine the transmitter of this virus.

A war on mosquitoes, brain fever and meningitis (which have been visiting every year for the last five years with increasing ferocity) is urgently called for by the public health and medical authorities of the State in South Arcot and Tiruchi districts, emphasised the private paediatricians here.

#### Epidemic in Burdwan

54500058 Calcutta THE TELEGRAPH in English  
9 Nov 87 p 2

[Text] Calcutta, Nov. 8 (PTI)—The West Bengal health department has instructed the local administration to take effective measures to combat the spread of encephalitis in different parts of Burdwan district, which has claimed about 105 lives in the last few months.

Official sources here said a team of medical experts had been sent to the areas to strengthen the medical units in different hospitals there and take stock of the situation. Although the official figures said that over 300 persons had so far been afflicted, experts and health authorities claimed that the number was much less than those of the previous year.

The state's health minister, Mr Prasanta Sur, in a recent instruction asked the chief medical officer of the district to accommodate all the affected persons at the district medical hospital.

The minister told newsmen that the number of people afflicted with the disease might be higher than those admitted to the Burdwan Hospital. However, there was no dearth of medicine for the patients admitted to other hospitals, he assured.

According to health officials, of the 33 blocks in the district, 27 were badly-hit by the dreaded disease.

Stating that the break out of such a disease had become a seasonal feature after the flood in the district for the last two years, the officials said efforts were being made on a war footing to locate the afflicted persons, if any, at the remote pockets in the district and prevent the disease from spreading to other areas.

/06091

## INDONESIA

### Gastroenteritis Cases in Ambo

54004302 Jakarta ANTARA NEWS BULLETIN in English 9 Nov 87 p A 1

[Text] Ambo, November 9 (ANTARA)—Some 15 people have died while 400 others have been hospitalized for treatment of gastroenteritis which has swept several villages here and the island of Ambo in Central Maluku since Thursday.

Most of the sufferers who died were children who had been brought to the centre when it was too late to save them, ANTARA learned Saturday.

/06091

## ITALY

### AIDS Hot Line Operating Since June

54002421a Rome PRONTO? in Italian Sep-Nov 87 p 12

[Article by Roberto Bencivenga: "AIDS—Are You in Doubt? Call the Hot Line 1678-61061"]

[Text] A number that we hope we will never have to call but which it would be a good idea to call if one has the slightest doubt is the AIDS hot line number in operation since June 1987. This is an undertaking of the National Commission for Combating AIDS in collaboration with SIP [Italian Telephone Company] and RAI [Italian Radio Broadcasting and Television Company]. The hot line number is 1678-61061 and it may be called from any part of Italy for a single telephone token or the minimum charge for a local call because the cost of the call will be reversed upon request. This service is in operation continuously from 2 pm-10 pm. Up to 5 pm the calls go directly to a group of specialists who respond immediately to questions asked by callers, and then a telephone answering service connected to a computer takes over the calls. If a caller leaves his own telephone number or address he or she will receive a personal response to the question. Otherwise questions of general interest will be answered during the RAI news broadcasts in segments devoted to this subject on TG1 [news on network No 1] at 1:30 pm, on TG2 at 7:30 pm and on TG3 at 7:00 pm.

On average there are about 800 calls per day, of which 200 to 220 are direct calls. The others call the answering service, and of these only 200 leave messages. The rest, perhaps fearful, hang up.

Who are the persons asking for advice? Seventy percent of them are persons between 20 and 40 years of age. Thirty-two percent of the calls come from the north, 43 percent from the center and 25 percent from the south. The region from which the greatest number of calls comes is Lazio, followed by Lombardy. These two regions have the sad distinction of being first in AIDS as well as in number of drug addicts. The latter spread the disease through the foolish practice of sharing needles.

The groups at highest risk (addicts and homosexuals) represent 10 percent of the calls, physicians and nurses 3 percent and parents 7 percent. Half of them say they do not belong to high risk groups, while 15 to 20 percent are individuals who have had more or less casual relations with probable carriers of the disease.

Pitiful cases, doubts and anxieties and human wretchedness are all part of these daily telephone conversations. There was a great need for this service, say the Health Ministry experts, because anyone in doubt needs reassurance or individualized information. This confirms how important information is in controlling social evils like AIDS which spread primarily because of ignorance and lack of good sense. That's why SIP responded immediately to the appeal of the Minister of Health by making its organization and technicians available to put the socially important undertaking of the hot line into effect.

13028/06662

### Funding for Aids Research

54002432 Rome International Service in Italian 1830 GMT 17 Dec 87

[Text] A triennial plan to find a cure for AIDS, providing for nearly 350 billion lire in investments, will go into effect as of 1 January 1988. The plan was approved today by the AIDS committee and health regional councillors as a result of the emergency situation outlined by Health Minister Donat Cattin at the end of the meeting. Nearly 80,000 seropositive people are already showing symptoms of the disease, leading one to surmise that by the end of 1988 the number of AIDS patients could reach 5,000. There are now 1,348 AIDS patients. I will ask the government, Health Minister Donat Cattin said, to raise the funds necessary for this plan with a decree covering expenditures in emergency situation, as is the case for the Civil Defense Department.

/06662

**Hepatitis Rate Alarms Insurance Companies**  
54002421b Rome LA REPUBBLICA in Italian  
22 Oct 87 p 22

[Text] Trieste—Fifteen percent of all Italians carry the hepatitis virus and at least 10,000 persons fall ill with viral hepatitis every year, for some of whom it is the beginning of a long period of suffering which will end in death from liver failure.

These are some of the facts brought out during the Conference on Medicine and Insurance held at Trieste and organized by ANIA [Italian National Insurance Association] under the sponsorship of Lloyd Adriatic. Speakers indicated in their reports that there are no cures for the more serious viral illnesses (such as AIDS) and that their spread is increasingly depleting the resources of insurance companies.

13028/06662

**LIBERIA**

**Condom Shortage Forces Higher Prices**  
54000029a Monrovia DAILY OBSERVER in English  
22 Oct 87 p 8

[Article by S. Togba Slewion]

[Text] As fears for the deadly disease AIDS continue, local distributors of condom, a preventive measure prescribed by medical experts, are said to be running out of the commodity.

This shortage, according to a survey conducted, is due to an unprecedented increase in the demand for condom; thus distributors have pushed the price of condom above the normal price of \$1.00.

Even the Family Planning Association of Liberia, the major supplier of condom, is said to have run out of the commodity, and sources at the association said that it intends to impose a "small fee" for condom in the future.

Several drug stores in the city have run short of supplies, and, according to one pharmacist, some customers are feeling uneasy over the shortage of the commodity.

Asked what has brought about the shortage, one druggist explained that the demand for condom rose sharply after the Family Planning Association and other medical experts advised the use of condom as a sure preventive measure against AIDS.

The source said that at the moment the Association has run out of supplies, but "there is no need to panic because a large quantity" is expected soon.

Recently the Family Planning Association had to ration the supply of condom to serve all of its clients. Instead of the normal supply of a hundred pieces to a client the association was forced to reduce the amount of ten per client.

One pharmacist observed that the demand for condom has become even greater following reports this week that three million people may develop AIDS in the next five years.

This was in reference to a report made by the director of the World Health Organization (WHO) AIDS programme to the General Assembly of the United Nations on Tuesday.

WHO reported that more than 62,000 people have died from AIDS in 126 countries since 1981 when the disease was first discovered.

08309

**Egypt Sends AIDS Victim Home**  
54000029b Monrovia DAILY OBSERVER in English  
28 Oct 87 p 1

[Excerpt] A Liberian who recently travelled to Egypt on a scholarship for training in agriculture got the shock of his life when he was ordered to return home after undergoing a test for AIDS.

The test results of the Liberian (name withheld) were reported to be AIDS-positive. He was among several Liberians and nationals from other African countries who went to Egypt for the training. A Malawian lady was also reportedly sent back home for a similar reason.

When contacted recently, Health and Social Welfare Minister, Mrs Martha Belleh, confirmed receiving a communication from the Foreign Ministry on the issue.

She, however, said her Ministry had not been able to contact the person concerned to get his blood sample to be sent to New York, the United States, for advanced testing.

Minister Belleh said it has been discovered that results for some test for AIDS(Acquired Immune Deficiency Syndrome) are misleading. She added that malaria symptom, in some cases, has any knowledge of the situation. The official said he had not been informed about the situation.

Meanwhile, an investigation conducted by our reporter proves that the alleged AIDS carrier has not reported to his place of work (name withheld) since his return.

So far, there have been two official reports of AIDS cases in Liberia, the latest of which happened last May in Bong Mines.

08309

**Special Program on AIDS Addresses Various Issues**

**Risk of Breast Feeding by Infected Mothers**  
54000030 Monrovia THE MIRROR in English  
29 Oct 87 p 4

[Excerpt] In view of the importance of breast milk and breast feeding for the health of infants and young children and of the increasing prevalence of human immunodeficiency virus (HIV) infection in many parts of the world a Consultation on Breast-feeding/Milk and HIV Infection was organized by the Special Programme on AIDS and the Division of Family Health from 23-25 June 1987. Its purpose was to review currently available information on the possible relationship between breast-feeding/breast milk and HIV transmission, and to identify further research needs in this area. Twenty participants from 25 countries attended the consultation. The participants represented epidemiology, virology, pediatrics and nutrition. The conclusions of the consultation are summarized below.

Evidence concerning the transmission of HIV from infected mothers to their infants suggests that between 25 and 50

of all offspring will be infected. The risk of transmission may depend on a number of factors, including: the timing of the mother's HIV infection; the mother's immunologic and overall health status; her parity and intercurrent infections; and other possible factors.

**Role of Contraceptives**  
54000030 Monrovia THE MIRROR in English  
29 Oct 87 p 4

[Excerpts] A meeting on contraceptive methods and human immunodeficiency virus (HIV) infection was organized by the Special Programme of Research, Development and Research Training in Human Reproduction, and the Special Programme on AIDS on 29-30 June 1987. Its purpose was to review available information on the possible interactions between contraception and HIV infection, and to identify research needs in this area. Sixteen participants from 9 countries attended the meeting. The participants represented epidemiology, immunology, sexually transmitted disease control, reproductive physiology, and gynaecology.

All current methods of contraception were reviewed. The following methods were reviewed in detail, since they present the highest potential for interaction with HIV infection: (a) intrauterine devices (IUDs); (b) combined oral contraceptives; (c) progestogen-only contraceptives (e.g. injectables, implants, progestogen-only oral contraceptives.)

0830

**LIBYA**

**Preventive Measures Against AIDS**  
38255cz Tripoli JANA in English 1825 GMT 29 Dec 87

[Text] Tripoli, al-Kanun [December—FBIS] 29, JAMA-HIRIYA NEWS AGENCY—AIDS represents a serious threat to health security of the human societies which forced many countries of the world to take preventive measures to stop and prevent this disease from spreading by way of immigration and movement of peoples from a country to another. Great Jamahiriya's concern for public health of the Libyan Arab society led it to provide the utmost securities in this respect. Practical measures had been taken where persons' entry into the Libyan Arab territories has become conditional to the availability of certificates proving that the persons concerned are free from AIDS. That is in accordance with a resolution reached by the General People's Committee in this respect.

**MADAGASCAR**

**First AIDS Case Reported**  
54000024 Port Louis L'EXPRESS in French  
30 Oct 87 p 3 txt

[Text] An epidemiological study carried out in Madagascar during the past few months enabled discovery of the first recorded case in the island of a seropositive AIDS carrier. This was announced by the secretary general of the Malagasy Ministry of Health, Professeur Andriamampihantona.

The epidemiological study covering 2,500 risk individuals was carried out by the Pasteur Institute of Madagascar. A preceding study in 1986 of a smaller number of risk individuals was completed without discovering a single seropositive individual.

Professor Andriamampihantona did not reveal the region of Madagascar where the AIDS carrier was identified, however, according to various reliable sources, the carrier was found at Toamasina (former Tamatave), the primary Malagasy port on the east coast.

9920

**MAURITANIA**

**Tunisian Medical Assistance For Mauritania**  
54004602 Tunis LE TEMPS in French 12 Dec 87 p 2

Nouakchott (TAP)—During a ceremony which took place on Wednesday, 2 Dec in Nouakchott, a batch of vaccines, antiseptic and antibiotic products were given to Mauritania by the Tunisian government in its continuing fight against yellow fever.

This batch of medicines was handed over by the Tunisian ambassador to Nouakchott Mr Mohamed Ghrib to Mrs Seye Tabara Fall, secretary general of the Ministry of Health and Social Affairs in Mauritania.

In a speech, Mrs Seye thanked the Tunisian government for its useful contribution to Mauritanian efforts directed toward eradicating the scourges, namely, yellow fever and cholera.

Mr Mohamed Ghrib reiterated the desire of the Tunisian government to give assistance to Mauritania whenever the need should arise.

The ambassador noted that in response to the Mauritanian appeal, two Tunisian medical teams arrived in Nouakchott.

The first team was tasked with vaccinating [the people] against yellow fever. The second team had meetings with Mauritanian officials to exchange views on all aspects of the epidemic.

## NIGER

### 34 AIDS Carriers Found, More Testing Planned 01081555 Dakar PANA in French 1240 GMT 8 Dec 87

[Text] Niamey, 8 Dec (ANP/PANA)—The secretary general of the Ministry of Health and Social Affairs said during a news conference as part of a national seminar on AIDS in Niger that 34 AIDS virus carriers had been identified. First, 17 AIDS virus carriers were detected, 9 of whom actually contracted the disease and 4 of whom died. Later, during a screening of 2,463 blood donors, 11 AIDS carriers were found. Another screening carried out in the prison environment identified 6 AIDS carriers out of 743 persons. This serological screening, which has been carried out in Niamey only, will be extended to the interior of the country. In the next few days, the Zinder National Hospital (in eastern Niger) and two departmental hospitals will benefit from screening equipment.

It must be recalled that Niger, which has been taking part in the international effort against AIDS as recommended by WHO, has set up a short-term national program to fight the disease. The objectives of the program are, among others, to establish a monitoring unit on AIDS, reduce the transmission of the virus and other retroviruses through blood, and to set up the basic tools to fight the plague over the short term.

## NORWAY

### Heterosexuals Now Majority of HIV-Positive Cases

#### Significant Increase In AIDS 54002419 Oslo AFTENPOSTEN in Norwegian 3 Nov 87 p 4

[Article by Hilde Harbo: "Homosexuals in HIV-Minority"]

[Text] About 70 percent of those who have tested positive for HIV in Norway are heterosexuals or bisexuals. Women now comprise 20 percent of those who have

been infected. "This shows that there is great potential for the spread of HIV in the heterosexual community. The AIDS epidemic is something that affects heterosexuals to a great extent," said Oivind Nilsen, chief consultant at the Department of Preventive Medicine for Infectious Diseases of the State Institute of Public Health (SIFF).

The latest figures from SIFF show that, to date, 65 cases of AIDS have been reported in Norway—16 of these during the last quarter. This is considerably higher than the number reported during any previous quarter. Four of the 65 cases are women. The number of AIDS cases in this country is now doubling every 11 months.

Although about 40 percent of those testing positive for HIV are intravenous drug abusers, remarkably few of them have developed AIDS so far. Only three of the 65 AIDS patients are listed as intravenous drug users.

Of the five persons who are believed to have been infected through heterosexual contact, one was infected by contact with prostitutes in countries with high infection rates, while two were infected in Europe or the United States.

In Norway, the average lifetime from AIDS diagnosis to death is just under 4 months. In the United States the survival time from diagnosis is three times as long. Leading AIDS experts in Norway believe this difference is due primarily to late diagnosis in this country.

The new and expanded definition of the symptoms on which an AIDS diagnosis is based is now being used in Norway. So far, one person has been diagnosed according to this definition. In addition to a positive HIV test, the patient must also have the so-called "HIV Wasting Syndrome," i.e. rapid and extreme weight loss.

So far, four children under 10 years of age have tested HIV-positive. Three of these are hemophiliacs, while one child was infected by one of his parents. Forty three persons have been infected through heterosexual acts. As many as 72 of the country's 454 municipalities have now reported one or more cases of HIV infection. Oslo is the county with by far the most cases testing HIV-positive relative to the number of inhabitants. Akershus and Buskerud occupy second and third places. Sogn og Fjordane is the only county that has not reported a single case of HIV infection.

#### Experts Doubt AIDS Forecast 54002419 Oslo AFTENPOSTEN in Norwegian 3 Nov 87 p 13

[Article by Cecilie Stray: "AIDS Experts Doubt Bleak HIV Prediction"]

[Text] AIDS experts have little confidence in the prediction by researcher Lasse Fridstrom and Dr Anne Eskild that Norway could have 750 thousand people infected with HIV in 20 years if Norwegians do not alter their sexual practices.

The calculations by Fridstrom and Eskild are based on the assumption that every infected heterosexual will infect a new victim every 4 years and every infected homosexual will infect someone every year. The estimate also assumes that foreigners will be responsible for infecting a large number of Norwegians. The figures were presented in the Saturday morning edition of AFTEN-POSTEN and they will also be published in the next edition of TIDSSKRIFT FOR DEN NORSKE LAEGEFORENING.

The researchers agree that it is difficult to draw conclusions concerning the future spread of the disease. It is precisely the large number of uncertain factors that has caused AIDS experts to criticize the calculations, which have been called "good mental gymnastics" and a "worst-case prognosis."

"So far, we know too little about the HIV infection among heterosexuals, but there is little indication that it will spread as much as Fridstrom and Eskild indicate," said Stig Froland, chief physician at the National Hospital. His opinion is supported by Svein Erik Ekeid of the Health Directorate.

"At a recent AIDS conference in France, where 128 countries were represented, there was no information indicating that the disease would spread among heterosexuals as rapidly as assumed in these calculations," Ekeid said.

A lack of knowledge of people's sexual habits also makes it difficult to predict the future, it is claimed.

"In addition, no one knows what will happen in the next 20 years. We must assume that new medications will change the course of the epidemic," said Georg Petersen, chief physician of the Oslo Board of Health.

The experts agree that information is the most important tool in the struggle to limit HIV infection.

"There must be an ongoing information campaign directed toward both high-risk groups and the general population. We know that people are open to information to a great extent, but we do not know if this information changes people's sexual behavior," Stig Froland said.

Despite their many points of criticism, the AIDS experts believe that the calculations are interesting.

"This is a warning to the responsible authorities that we must now take steps to deal with the many serious cases of HIV infection that we will face in the future," Stig Froland said.

"We cannot relax, but we must continue our information campaign to make people understand what can happen if they do not change their sexual practices," Georg Petersen said.

"These calculations show that we must make a strong effort to limit the spread of the HIV infection," Svein Erik Ekeid said.

09336

## PORUGAL

### Tuberculosis Statistics Show Deaths Continuing

54002418 Lisbon DIARIO DE NOTICIAS in  
Portuguese 30 Oct 87 pp 14- 15

[Excerpt] More than 400 people died in Portugal in 1986 as victims of tuberculosis. This disclosure was made by the INE [National Statistics Institute] in its latest statistics on causes of death. These deaths were recorded on the mainland, in the Azores, and Madeira.

The numbers indicate that, in 1974, 837 Portuguese citizens died as a result of tuberculosis; so, in the last 12 years, we have witnessed a reduction of the mortality rate by almost half. While this is a positive step, it is not yet sufficient in the opinion of specialists, who furthermore point out that there has been a cure for this disease for over 30 years.

On the other hand, the rate of incidence of the disease, that is, the number of new cases diagnosed each year, has also gone down, although in a less pronounced way, so it continues to be seven times higher than the European average.

With 6,419 new cases of tuberculosis diagnosed in 1986, the rate of incidence is now 61.8 for every 100,000 inhabitants, whereas the previous year, it had been 67, and 12 years ago, it was 78.

Speaking on this topic, Faceira de Sousa, the director of the tuberculosis section of the General Board of Primary Health Care, stated that his unit plans to increase the number of vaccinations with BCG and improve the performance of health clinics, which will eventually contribute to reducing the rate of incidence even more.

This specialist stressed that, if this is achieved, at least "more than 15 percent per year," then "we will reach levels comparable to those of some European countries within 5 to 10 years."

Currently, more than 250,000 BCG vaccinations per year are being administered, and 968,000 micro-X-rays are being made within the scope of the campaign to track high-risk groups of the population.

Beginning last year, the obligatory X-ray examination was extended to young people in the last 3 years of secondary school, and also to miners and the elderly in nursing homes.

Although the incidence of tuberculosis is greatest among adolescents and young adults, it is the elderly who show the highest mortality rate, due to the delayed effects of tuberculosis that is not completely cured, and, additionally, because many elderly people have low resistance to the disease.

The INE statistics reveal that of the 403 people who fell victim to tuberculosis last year, no fewer than 315 belonged to the 50-and-older age group.

Adults between 30 and 49 years of age had 73 fatal cases, while young people from 20 to 29 years of age had just 12. It should be pointed out that no adolescents from 15 to 19 years of age who were affected by tuberculosis died as a result of the disease, in spite of the fact that their age group is considered to be a high-risk group.

9895/12223

## SIERRA LEONE

**EEC AID for Yellow Fever**  
01192109 Conakry Domestic Service 1945 GMT 19 Dec 87

[Summary] EEC Provides Financial Aid—the EEC has just granted 85,000 ECUs [European Currency Units—fbis], or \$100,000 to our country. This emergency aid will be used in the fight against the yellow fever outbreak.

## SOUTH AFRICA

**Doctor Reports Low AIDS Incidence in Border Region**  
54000027b East London DAILY DISPATCH in English 31 Oct 87 p 7

[Excerpt] East London—The Border region appeared to have escaped the brunt of the spread of Aids, the Cape representative of the national advisory group on the disease, Dr Frank Spracklen, said in an interview yesterday.

Dr Spracklen addressed the East London Medical Association this week on the latest developments in the field of Aids studies, before continuing his lecture tour to King William's Town and Queenstown.

He said he was "impressed with the low incidence of Aids in East London and evidence of responsible behaviour by the public in general."

No case of Aids has been discovered in the city to date, although 84 victims have been reported nationwide.

Reports from the United States have indicated that as many as two in ten Africans are already carrying the virus, and predict that this figure could rise to six in 10 by the turn of the century.

He attributed the low incidence of the killer disease in the Border area to a smaller homosexual population than that of the major cities; local tribal and social customs that frowned on anal intercourse; and a heightened public awareness of the disease.

/09599

## Health Regulations Require Deportation, Isolation for AIDS Victims

54000023a Johannesburg BUSINESS DAY in English 2 Nov 87 p 3

[Article by Susan Russell: "Deportation, Isolation for AIDS Victims"]

[Text] Government has promulgated health regulations that allow medical officers of health to enforce the isolation of people infected with communicable diseases—including AIDS.

The regulations stipulate, however, that the MoH has to believe the danger exists that those people will infect others, and mechanisms exist for appeals against individual decisions.

Strict new health and immigration measures gazetted last Friday will also allow government to deport aliens suffering from AIDS, cholera, pestilence and yellow fever.

In terms of the notice issued by the Department of Home Affairs, non-citizens suffering from these diseases will be declared prohibited persons.

The new regulations mean migrant mineworkers and other foreigners carrying the AIDS virus will be liable for repatriation.

Regulations promulgated simultaneously under the Health Act give health and medical authorities wide powers to contain and prevent the spread of a list of about 20 communicable diseases.

A local authority has the power to close any teaching institution or place of public recreation or entertainment if a communicable disease is present and the disease constitutes a danger to health.

Once an MoH is satisfied a person is a carrier of a communicable disease, he is empowered to order in writing that the person be removed to a hospital or other place of isolation to remain under medical supervision.

/06662

**21 New AIDS Cases Diagnosed This Year**  
54000023b Johannesburg *THE CITIZEN* in English  
6 Nov 87 p 13

[Article by Jacky Lesage]

[Text] Twenty one new cases of AIDS have been diagnosed this year in South Africa—the same number as last year—and according to the Advisory Group on AIDS more cases can be expected before the end of the year.

The trend overseas has been the doubling of cases yearly, but South Africa has not followed suit.

The council said that AIDS in South Africa is still confined to the homosexual population, and of the 64 cases recorded since 1982—56 have been homosexual or bisexual men—55 White and one Coloured.

Two heterosexual men who had contracted AIDS, had had contact in central Africa, three patients were infected from blood transfusions before testing of donors and donor blood was established.

Three haemophiliacs were also contaminated through infected blood products used in their treatment.

Forty seven AIDS sufferers have died, which represents a morality rate of 73 percent.

Although no cases of AIDS have as yet been diagnosed in Black South Africans, health authorities are monitoring the situation, as a number have been identified as carriers of the virus.

In a statement issued by the advisory group after a meeting in Pretoria recently, the group said that it is “inevitable that cases of AIDS will occur in all races.”

“It is expected that in due course the number of cases in Blacks will exceed those in Whites. Then the patterns of AIDS in the Western world and that of the form common in central Africa, will exist side by side in this country,” the council said.

According to the statement, the education of all population groups, and particularly Blacks, is becoming increasingly important to prevent the spread of the disease.

“The group has therefore urged the government to expedite the extension of current programmes aimed at containing the spread of sexually transmitted diseases.

“The advisory group is also expanding its local activities by establishing regional committees among its members. These committees have already co-opted members of local authorities which should lead to closer involvement in such aspects as education and prevention.”

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**Unisa Professor: AIDS 'No Basis for Firing'**  
54000023c Johannesburg *BUSINESS DAY* in English  
12 Nov 87 p 3

[Article by Mandy Jean Woods]

[Text] Employers may not fire, change duties or compel medical testing of staff known or thought to have AIDS. But they may ask staff to submit to AIDS testing on a voluntary basis.

Unisa professor Sas Strauss, a specialist in medical law, made the remarks yesterday to more than 100 delegates to an Institute of Personnel Management (IPM) seminar on AIDS in the Workplace.

Strauss said the new law—gazetted 11 days ago—empowers only medical officers of health (MoH) and immigration officials to compel people to take AIDS tests.

He said it would appear that coercion—even physical force—may be used to get a suspected AIDS victim tested if he or she refused to submit to the request by an MoH or immigration officer.

“The government may also legally be able to order doctors or nurses to conduct an AIDS blood test against their will and against the patient’s will under circumstances embodied in the new legislation.”

The problem for employers is that there is not much tried and tested law concerning AIDS, but there are some common law principles which apply to a certain extent, he said.

An employer can require staff to submit to an AIDS test before employment, because under the Industrial Council regulations an employer may require a full medical before employing someone.

“But this could not be done after employing someone unless there is a clause in the employee’s contract entitling an employer to insist on a medical examination as a condition of continued employment.”

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**Police Use Rubber Gloves as AIDS Precaution**  
54000027a Johannesburg *THE CITIZEN* in English  
16 Nov 87 p 4

[Text] Johannesburg police have been instructed to wear rubber gloves when handling corpses of badly injured, bleeding persons, while Durban vice squad members have been told to take similar precautions when dealing with prostitutes.

SAP liaison officer, Colonel Frans Malherbe, confirmed yesterday that wearing rubber gloves had been obligatory "for some time" when officers are exposed to a person's blood.

The measure was a precaution against possible Aids infection, he said.

Head of Durban's vice squad, Captain Dougie Stevenson, said members of the squad had been told a week ago to wear rubber gloves when arresting known prostitutes.

He denied that there was any panic within the squad's ranks. "There is no harm in taking precautions," he said.

The introduction of rubber gloves came less than a week after two Durban prostitutes were arrested in the city allegedly for soliciting and tests indicated that they were Aids carriers. Later tests, however, proved negative.

Capt Stevenson said his squad was aware of 20 White girls who walked the city's streets, but added that there were many more who carried on their business in hotels or flats.

He estimated that there were 300 Black prostitutes in Durban.

Johannesburg prostitutes, meanwhile, are insisting that their clients use condoms and charging those refusing to do so an extra fee.

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**Natal Doctors Call for AIDS Education Drive**  
*54000037 Durban THE DAILY NEWS in English*  
*27 Nov 87 p 9*

[Text] The heterosexually spread AIDS situation in Natal—already a serious problem with an equal number of infected black men and women—is going to worsen if an education drive is not undertaken soon, doctors warn.

The Transvaal is already cracking on a massive AIDS education programme in the form of a privately funded AIDS Education Centre and, if funds do not become available, Natal will be left behind.

The private sector, for example the Chamber of Mines, has realised that to wait for the Government to announce an AIDS programme could be futile.

Durban this week followed suit and various authorities have taken the situation into their own hands: the use of condoms in the fight against AIDS will be highlighted in a Durban City Health Department education drive.

Medical Officer of Health Dr Muriel Richter said today that it was going to be more practical to aim at the use of condoms than trying to get people to change their lifestyles.

Medical experts have warned that if people are not going to be monogamous, then the only way to prevent the spread of AIDS is by using a condom.

Prostitutes—three of whom were recently found in Durban to be infected with the AIDS virus—will also be advised to insist on the use of condoms.

During a meeting this week of the Natal AIDS Advisory Group, comprising various local health authorities, it was decided that between now and April various possibilities of embarking on a local AIDS education programme would be explored.

By the time the group meets in April next year it is hoped that funds and facilities will have become available.

Natal AIDS authority Professor Denis Pudifin said that funds were urgently needed: "There is a great need in Natal/KwaZulu for person-to-person education about what AIDS is, how it is spread and how it can be prevented. There is also a need for written material, but obviously money is necessary for this to happen."

An AIDS Education Centre is to be opened in Johannesburg early next year and it has been heralded as one of the most positive steps taken yet in the battle against AIDS, in which education is the only weapon.

Aimed mostly at the black population, who are the people most at risk from African AIDS (heterosexually transmitted), the Johannesburg centre is the first real move to educate on a wide-scale basis.

It has been stressed again and again that the only weapon against AIDS is education as that there is no cure or vaccine against it.

Companies or other bodies interested in making donations to this cause may telephone Professor Denis Pudifin on 254211.

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**Nation's First Black AIDS Victim Being Treated in Durban**  
*54000040a Johannesburg THE STAR in English*  
*3 Dec 87 p 4*

[Text] The first black man in South Africa diagnosed as having AIDS is being treated in a Durban hospital, a spokesman for Durban University's medical school confirmed yesterday.

The man, who remains anonymous, is middle-aged and heterosexual. The spokesman would not reveal the man's age, where he was being treated or any further details.

According to Dr Ruben Sher, of the South African Institute for Medical Research, 87 cases of AIDS have been diagnosed in South Africa since 1982.

Of these, 66 were South Africans and 21 non-South Africans. The morality rate was 72 percent, Dr Sher said.

#### Majority Were Homosexual

Including this latest report from Durban, there has been one black AIDS sufferer, one coloured man, one white woman and 64 white men—58 of these homosexual.

The white woman, who is married and from the PWV area, was apparently treated in Johannesburg two months ago. Dr Sher would not reveal her name and address nor where she was treated. He said she had since been discharged and had gone home.

Dr Sher yesterday urged women to become more conscious of the condom and ensure that it was used.

He said he could not foresee the development of a vaccine against AIDS in the near future.

Dr Sher was speaking at a ceremony at the University of the Witwatersrand at which he was given the Wits Alumni Honour Award—the highest award made by past students to one of their convocation members for exceptional service to the community.

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#### AIDS Expert Urges Traditional Healers To Help in Prevention

54000040b Johannesburg *THE CITIZEN* in English  
4 Dec 87 p 11

[Text] Traditional healers play a vital role in the education of Black people in the prevention of the spread of AIDS, said Dr Reuben Sher yesterday.

Dr Sher, an AIDS expert, was one of the speakers at the second annual AIDS symposium for traditional healers held in Johannesburg.

The time was ripe to educate Black people to try to prevent the further spread of the disease, said Dr Sher. Unlike the White community, where the disease was prevalent in men, AIDS was found in both sexes in Blacks, and was increasing.

There was an alarming number of the cases in Africa, particularly in prostitutes and truck drivers who were spreading the disease at a rapid rate.

Dr Sher said that sangomas could help the conventional medical fraternity by looking for symptoms of the disease and sending "suspect" cases for blood tests.

Included in these symptoms was a skin cancer found only in Black people, accompanied by a persistent high fever, swollen glands on the face, neck and armpits, weight loss for no apparent reason, chronic diarrhoea, night sweats and malaise.

AIDS was a deadly disease that could be prevented, said Dr Sher.

The disease could not be contracted by casual contact, but through sexual intercourse or contact with infected blood.

Although every effort was being made to develop a vaccine for the killer disease, the earliest date this could be expected was 1990.

AIDS was not respecter of persons, said Dr Sher. "It is not so much who you are, but what you do—and with whom."

Dr Dennis Sifris, an associate of Dr Sher, said that anyone who was involved in the business of healing sick people was at risk in catching the various diseases of their patients.

He too stressed that AIDS was not contacted by casual contact such as touching the patient, but warned that dirty needles or unsterile blood letting instruments could become contaminated with the virus and so the healer could unwittingly spread the disease.

Mr Fusi Zazayokwe, the business development manager for a South African distributor of condoms, said although Black people were not all familiar with condoms, and many rejected the use of such a device, the condom was a sure way to ensuring the prevention of the spread of AIDS.

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#### New Typhoid Vaccine Developed

54000032a Johannesburg *SUNDAY TIMES* in English  
22 Nov 87 p 3

[Article by Charmain Naidoo]  
A new typhoid fever signal a medical first for South Africa

And the new shot, developed by the South African Institute for Medical Research, replaces the existing vaccine which, with minor modifications, dates back to the turn of the century.

According to the institute, this is the first time that a typhoid vaccine which offers practical application in endemic areas has become available.

It has been tested on about 12,000 black and white schoolchildren in the Northern Transvaal over the past two years and found to give protection to between 60 and 70 percent of them.

It has yet to be determined how long this immunity lasts.

When the existing vaccine was first tested on British soldiers in the South African War it was found that it was too toxic for general use.

The new one has virtually no side-effects and is given as a single dose rather than the two to four doses required for other typhoid vaccines.

Typhoid, an often serious epidemic infection associated with poor sanitation, is a particular problem in the Eastern Transvaal and northern Natal where several thousand cases are recorded each year.

#### Problem

The disease is associated with the hotter seasons and high rainfall and in these regions ranks with malaria and bilharzia as one of the major infections, especially among children.

It is also a serious health problem in other third world countries in Africa, Asia and South America.

If the infection is severe and untreated, it could mean death for the victim.

Project co-ordinator Dr Keith Klugman said: "It is hoped that large-scale administration of the vaccine in the populations at risk will help to reduce markedly the incidence of the infection in South Africa, as well as in other parts of the world."

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**'Alarming Increase' in Malaria in Natal, Kwazulu**  
09041734 Johannesburg Television Service in English  
1600 GMT 4 Jan 88

[Text] Medical authorities are stepping up their fight against malaria, including the new killer strain, which has already killed 6 soldiers and a civilian and infected another 3,000 people.

A leading South African medical specialist has warned that pregnant women and babies under 6 months should stay out of malaria danger areas such as the Kruger Park, Komatipoort and Malelane.

There has been an alarming increase in number of reported cases of malaria in Natal and Kwazulu. The Department of National Health and Population Development in Natal says there were 5,806 reported cases of the disease in the area during the first 10 months of 1987, compared with 187 cases during 1981 and 338 cases during 1983.

## TANZANIA

**Japan To Help Combat Malaria**  
54000027c Nairobi DAILY NATION in English  
6 Oct 87 p 2

[Text] Dar es Salaam, Monday—Japan will finance an ambitious anti-malaria campaign aimed at eliminating malaria-bearing mosquitoes in the Tanzanian Indian Ocean port city of Dar es Salaam beginning next January, it was learned here today.

The anti-malaria campaign, costing \$428,933, will involve aerial spraying of the beach residential areas and also house-to-house spraying operation in the city centre, while the suburban areas would be provided with special wall-paints to kill mosquitoes.

Malaria, which has invaded even the cold-highland areas of the country, is considered to be the single largest killer disease in Tanzania.

The acting Dar es Salaam city director, Mr George Chale, said that under the programme, Japan will provide all the necessary inputs including chemicals, sprayers.

At the end of the one-year operation, Japanese and Tanzanian health experts will assess the effectiveness of the anti-malaria campaign. (AFP)

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## THAILAND

**AIDS Master Plan Reported**  
54004304a Bangkok THE NATION in English  
25 Jun 87 pp 1, 2

[Article by Tulsathit Taptim: "Master Plan To Fight AIDS Unveiled"]

[Text] The Communicable Disease Control Department has unveiled the country's first long-term plan to combat AIDS which has already claimed the lives of seven people in the country.

A student was the seventh AIDS victim to die early this month, according to Dr Vinij Assavasena, the director general of the department.

Vinij told "The Nation" that the four-year anti-AIDS programme, which will be financed with a 40-million-baht budget, is aimed at effectively expanding Thailand's limited campaign against the infectious and fatal disease to cover the whole country.

The plan, which is expected to be approved by the Health Ministry, will soon be presented to the Cabinet, he said.

The programme, which will be formally launched next year, involves intensive medical checks on high-risk groups nationwide, laboratory tests and educating the general public on AIDS, he said.

As part of the programme, secondary school students will be taught about AIDS (Acquired Immunity Deficiency Syndrome) beginning next school year, he said.

The director general said that the implementation of the plan does not mean that the AIDS situation in Thailand is critical. "We only want to expand our work and make it more effective," he said.

Vinij said that the department's on-going campaign against the deadly disease has been hindered by budgetary constraints.

Under the new programme, medical personnel nationwide will be trained on methods to control the spread of the disease, he said.

The department also plans to improve laboratory equipment to enable state and private hospitals nationwide to handle preliminary blood test for AIDS, he said.

To prevent AIDS being spread by "carriers"—symptom-free persons carrying the AIDS virus that can infect others—to the general public, about 500,000 condoms will be distributed to every venereal disease control centre each year for VD patients, he said.

AIDS-related health personnel will also be "inducted" to conduct research on AIDS with support from the department, he added.

Explaining why the department decided to mount intensive public relations campaign on AIDS, the doctor said most of the AIDS victims in Thailand are students and "high-class gays" who might have been overlooked in the past.

"It is very surprising that male prostitutes in this country have so far been free from AIDS," he said.

Homosexuals, male and female prostitutes, drug addicts and prisoners are known to stand the highest chance of being afflicted by the AIDS virus or Human Immunodeficiency Virus (HIV).

Dr Praphan Panupak, an AIDS specialist of Chulalongkorn Hospital, said recently that well-educated gays have shunned AIDS checks which they fear may tarnish their reputation.

The Communicable Disease Control Department earlier targeted its anti-AIDS drive at these high-risk people and was against publicizing the horror of the disease.

Vinij said the planned wider publicity to be carried out through the mass media will not be done in a "sensational manner."

He said the situation is not serious even though there have already been 11 confirmed AIDS cases in Thailand.

A male AIDS patient, who was a student in his early 20's succumbed early this month, bringing the AIDS death-toll in Thailand to seven since the first case was reported in 1984, he said.

The patient died at Chulalongkorn Hospital on June 7, he said.

Thailand has since 1984 discovered 11 confirmed AIDS cases involving two Americans, two Germans and seven Thais. The foreigners and three of the Thais have died.

Most of the Thai victims were male students in their 20s who contracted the disease from foreigners, according to the doctor.

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#### Confirmed AIDS Cases

54004304d Bangkok *BANGKOK POST* in English  
22 Jul 87 p 1

[Text] Thailand has 81 confirmed cases of Acquired Immune Deficiency Syndrome, Prime Minister's Officer Minister Chirayu Na Ayutthaya said yesterday. Dr Chirayu said the Public Health Ministry told him most of the AIDS patients found in Thailand were not prostitutes of either sex. The ministry also reported that those who spread the disease were not tourists.

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#### AIDS Carriers in Isolation in Jail

54004304c Bangkok *BANGKOK POST* in English  
7 Aug 87 p 1

[Article by Rungruang Jinakul: "49 AIDS Carriers Put in Isolation at Bang Kwang"]

[Text] Some 49 prisoners at Bang Kwang maximum security jail, including nine foreigners, are infected with the AIDS virus and have been confined to an isolated block to prevent the spread of the deadly disease, a source said yesterday.

Two other prisoners, a Frenchman and a Spaniard, who have developed AIDS symptoms, have been flown back to their home countries, the source said.

Most of the 51 inmates found with antibodies to the human immune deficiency virus (HIV) were intravenous drug-users, he said, admitting that the heroin trade among warders and inmates was brisk. Prisoners could obtain the drug without much difficulty so long as they had the money, he said.

The source, who is a senior prison official, said the Public Health Ministry's Communicable Diseases Control Department conducted blood tests on 7,000 of the 7,440 inmates in Bang Kwang about two months ago.

The results, he said, showed that 40 Thais, four Americans, three Frenchmen, one West German, one Briton, one Australian and a Spaniard were found to be infected with the AIDS virus. Of these, one Frenchman who had been granted amnesty by His Majesty the King, and a Spaniard were sent home because they had developed AIDS symptoms.

Exposure to the AIDS virus does not necessarily mean the persons infected will get AIDS, but they are carriers who can spread the disease. There are no facilities in the prison to handle AIDS cases.

The source said the discovery of pre-AIDS and AIDS cases in Bang Kwang had alarmed officials and inmates, who demanded that those who tested positive be moved elsewhere.

#### Pamphlets

"As a result, we isolated them in the solitary zone and have forbidden them from getting in touch with other people for fear they may spread the disease," he said.

The Corrections Department's Medical Centre has distributed hundreds of four-page pamphlets giving basic instructions on keeping AIDS at bay.

Measures were also tightened to curb heroin peddling and drug abuse among prisoners, the source said.

A few prisoners, he said, were arrested each month for drug abuse and heroin trafficking, and a few homosexuals had been punished after being caught engaging in sexual activity.

A warder said yesterday he felt very nervous and apprehensive about having to look after pre-AIDS inmates in the segregated zone.

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#### Wrap-up on Dengue Epidemic, Lasting Problems

54004304b Bangkok THE NATION in English  
8 Sep 87 p 3

[Text] Latest reports from hospitals all over the country show that Thailand is experiencing the worst incidence of hemorrhagic fever since the country started the system of reporting cases of contagious diseases in 1970.

Preliminary reports as of the end of August showed a total of 79,023 cases and 399 deaths, according to the Epidemiology Division. Last year, there were only about 80,000 cases of hemorrhagic fever with about 500 deaths.

"The epidemic this year is the worst since we started compiling statistics on contagious diseases in 1970," said an informed official of the Public Health Ministry.

In July alone 20,511 cases were reported of which 78 ended in death. More reports were coming in and the total number of cases in July may likely exceed 30,000 while the death count may top 100 said the official.

Health officials expect the total hemorrhagic fever cases this year to exceed 100,000.

The Central Region so far has reported the largest number of cases in a single region while the South reported the least. Five southern provinces of Satun, Pattani, Yala, Narathiwat and Phatthalung had very few cases of hemorrhagic fever. Two northern provinces of Mae Hong Son and Phrae were also relatively free from the disease.

Reports from Nakhon Sawan in the Central Region and Sakhon Nakhon and Nakhon Phanom in the Northeast indicated that the epidemic in these three provinces was serious.

Bangkok had 4,771 cases in which 9 victims died. The number is the largest from a single province. But since the Bangkok metropolis has over six million people, the number of hemorrhagic fever cases is still low in terms of cases per capita. The relatively low number of deaths from this contagious disease in Bangkok is attributable to the readily available medical service in the capital, said the official.

Health officials expect the number of cases and deaths from this disease to decline this month.

The Public Health Ministry has alerted all provincial health authorities to involve local people in campaigns to eradicate anopheles mosquitoes and to pay special attention to protecting children from the mosquitoes carrying the disease, the official said.

He also said studies are being conducted to determine whether the presence of large cement jars in rural villages has contributed to the spread of the disease by providing

breeding places for anopheles mosquitoes. The government has urged villagers in rural areas to build large cement jars to hold rain water for use in time of shortage. Critics blame the government for inadvertently creating ideal breeding ground for these mosquitoes because villagers do not always keep their water jars properly covered all the time.

Health officials, however, noted that there are plenty of natural breeding grounds and having large water jars around the house was certainly not a major factor for the epidemic this year.

A doctor at Chulalongkorn Hospital said patients attacked by the virus which causes the hemorrhagic fever seem to have developed new symptoms, especially liver and brain problems. Moreover, an unusually large number of grownups have also been afflicted with this disease this year, she said.

She also noted that figures of the Epidemiology Division tended to be under-reported because a large number of patients sought treatment in private clinics and thus their cases may not be reported.

Another senior doctor at Chulalongkorn Hospital has estimated that there were over 100,000 cases of hemorrhagic fever this year and over 500 have died. She also said total cases this year will likely reach 140,000.

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**Dengue Outbreak Compared With 1985**  
54004304e Bangkok BANGKOK POST in English  
3 Aug 87 p 3

[Text] Hemorrhagic fever is spreading throughout the country as fast as in 1985, when there was a record number of cases of the disease, a Communicable Disease Control Department source said yesterday. He said that over 50,000 cases of hemorrhagic fever had been found since the beginning of the year, similar to the number found during the same period in 1985. Two hundred and ninety people have died from the fever since the beginning of this year. Over 80,000 cases of the fever were recorded and over 500 patients died from the disease in 1985. The number of hemorrhagic fever cases this year is expected to be similar to the 1985 figure.

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**Reportage on 1987 Dengue Epidemic**

**Highest Levels in 4 Years**  
54004303 Bangkok DAILY NEWS in Thai  
3 Nov 87 p 3

[Unattributed report: "Number of Dengue Cases Is High"]

[Excerpt] A report issued by the Epidemiology Division stated that during the period January-October 1987, the number of people stricken with dengue fever was four

times higher than the average for the 4 previous years. There have been a total of 106,986 cases of dengue fever, and 481 have died. The number of cases by region is as follows: central region, 32,430 cases; northern region, 24,180 cases; northeastern region, 43,826 cases; and southern region, 6,550 cases.

The 13 provinces in the central region that have each reported more than 1,000 cases are Bangkok Metropolitan, Samut Prakan, Nonthaburi, Nakhon Pathom, Ratchaburi, Phetburi, Ayuthaya, Saraburi, Lopburi, Chonburi, Chachoengsao, Chanthaburi, and Prachinburi. In the north, with the exception of Mae Hong Son, Lamphun, Phrae, and Uttaradit provinces, every province has reported more than 1,000 cases. In the northeast, with the exception of Yasothon Province, every province has reported more than 1,000 cases. In the south, the provinces that have reported more than 1,000 cases include Krabi, Nakhon Sithammarat, and Songkhla. The most interesting statistic is that Bangkok Metropolitan has the largest number of cases of dengue fever. A total of 5,689 cases have been reported this year as compared with only 447 cases in 1986, an increase of 12.7 times.

#### Reasons for Outbreak

Bangkok MATICHON in Thai 3 Nov 87 pp 1, 16

[Excerpts] On 2 November at the Ministry of Public health, Mr Watcharin Ketawandi, the deputy minister of public health, and Dr Uthai Sutsuk, the director-general of the Department of Communicable Disease Control, issued a statement on "Dengue Fever and Disease During the Cold Season."

Mr Watcharin said that there have been a total of 133,091 cases of dengue fever in 1987. Of these, 765 have died. The number of cases of dengue fever is five times higher as compared with the same period in 1986. The northeast has the largest number of cases, 49,506 cases. This is followed by the central region with 43,399 cases, the north with 31,686 cases, and the south with 8,500 cases. The provinces with large numbers of cases include Mukdahan, Tak, Nakhon Phanom, Krabi, Sakon Nakhon, Uthai Thani, Samut Songkram, Phetburi, Phetchabun, Chanthaburi, and Trat.

Dr Uthai talked about the reasons for the severe outbreak of dengue fever. He said that this is the worst outbreak of dengue fever in 29 years, which makes it difficult to care for the sick. The reason for the outbreak is that there are many breeding places for mosquitoes in heavily populated areas. A study conducted by the Epidemiology Division found that 80 percent of the mosquito breeding places are located in sources of water around houses. Because of the nature of dengue fever, there are outbreaks every 2 years. As a result, more and more people have contracted the virus. It is expected that next year, the dengue epidemic will be even worse than in 1987.

Dr Uthai said that the Ministry of Public Health is taking steps to get various mass groups both in the cities and rural areas to join together to destroy the water sources that serve as breeding grounds for mosquitoes. People are being encouraged to raise "hang nokyung" and "kambusia" fish, which eat mosquito larvae, in order to destroy the larvae in the villages and cities. The malaria units and centers in the provinces will raise these types of fish for distribution to the people.

#### **Other Health Ministry Reports**

*Bangkok SIAM RAT in Thai 31 Oct 87 p 3*

[Unattributed report: "More Than 100,000 Cases of Dengue Have Been Reported This Year; More Than 700 Have Died"]

[Text] On 30 October, Dr Prawet Wasi, the chairman of the National Epidemiology Commission, Ministry of Public Health, issued a statement on water jars and dengue fever. He said that there have been reports that water jars have led to the outbreak of dengue and that the epidemic will grow worse. It is already much worse than last year. These reports have alarmed the people. The commission has studied the relationship between water jars and dengue at the national and provincial levels. There is no clear evidence showing that there is any relationship between the two.

Dr Prawet said that building large water jars has no effect on the spread of dengue. The mosquitoes breed in small containers such as coconut shells. Thus, to destroy the mosquitoes, we must destroy these breeding places. People must also take precautions to prevent being bitten by mosquitoes during the daytime.

During the period January 1987 to 24 October 1987, 138,000 cases of dengue fever were reported. Of these, 777 have died. The largest number of cases was reported in July. The largest number of cases relative to the size of the population is in the north followed by the northeast. But in terms of the number alone, the northeast has the largest number of cases. Bangkok Metropolitan accounts for 10 percent of the cases. Most of the patients are children. But people of any age can contract this disease.

#### **Preventive Measures Discussed**

*Bangkok DAO SIAM in Thai 28 Sep 87 pp 1, 16*

[Unattributed report: "641 People Have Died From Dengue Fever"]

[Excerpt] Mr Watcharin Ketawandi, the deputy minister of public health, talked with reporters about the reports of a severe dengue epidemic in Thailand. Reports have stated that the number of cases this year is much higher than in previous years. He said that the Ministry of Public Health is taking action to deal with this problem. It is doing everything possible and has made plans to control the spread of this disease. The Department of Communicable Disease Control is providing chemicals

to eradicate the adult mosquitoes and "abet" sand to eradicate the larvae. It is providing these materials to provinces nationwide and implementing resolute control measures.

In promoting dengue control measures in populated areas, the Ministry of Public Health is cooperating with various schools subordinate to the Ministry of Education, with students organizing activities. Provincial public health officials are coordinating things with the provincial primary education offices to organize programs and provide "abet" sand and documents to the schools. Teachers are teaching their students about dengue fever and showing them ways to guard against this disease. Steps are also being taken to eliminate the mosquito breeding grounds at the schools. Students have also been asked to apply these measures in and around their homes in order to eliminate mosquito breeding places in their homes.

Mr Watcharin said that if these measures are carried out on a broad scale, this will help control this disease. Most of the patients are primary school students. The mosquitoes spread this disease during the daytime, which is when children are at school. At the same time, the Ministry of Public Health will provide information and carry on these activities on a broader scale so that people can control dengue fever in their locality.

#### **Bangkok Anti-Dengue Efforts**

*Bangkok SIAM RAT in Thai 14 Sep 87 pp 1, 14*

[Unattributed report: "Serious Outbreak of Dengue Fever; There Have Been Almost 100,000 Cases This Year"]

[Excerpts] From 1400 to 1600 hours on 13 September 1987 at the auditorium of the Public Relations Department, a debate was held on how to help control dengue fever. Those participating in the debate included Dr Chalat Phiraphat, the deputy govenor of Bangkok Metropolitan for public health, Dr Bunluan Phanthumchinda, the deputy director-general of the Department of Medical Sciences, Mr Prayun Chanyawong, a representative from the mass media, and Mrs Phaithun Krachangsin, the president of the Bangkok Metropolitan Village Scouts. The moderator was Dr Prasong Tuchinda, the president of the Children's Welfare Association of Thailand.

Dr Prasong said that dengue fever is a viral disease that is transmitted by mosquitoes. Before doctors knew how this disease was caused or how to treat the disease, the death rate from this disease was 20 percent. But after 1958, which is when doctors discovered what causes this disease and learned how to control the disease, the death rate dropped to only 1-2 percent. However, even though advances have been made in treating the disease, the number of people contracting the disease has increased every year, with the number this year being the highest ever. Since the beginning of the year, almost 100,000

cases have been reported nationwide. There have been 10,000 cases in Bangkok Metropolitan. Although no one has died, doctors hate to see anyone contract this disease in view of the fact that we know what causes this disease.

Dr Prasong said that dengue does not afflict just children of preschool age. Youths and adults can contract the disease, too. There is no medicine to treat dengue specifically. He said that antibiotics and medicinal herbs cannot cure this disease directly. And there is no vaccine to prevent this disease. The development of a preventive vaccine is in the test stage. It will probably be several more years before we have such a vaccine. Thus, the best way to prevent this disease is to educate the people about preventive measures.

Dr Bunluan said that the Department of Medical Sciences conducted detailed studies on mosquitoes for 7 years, that is, during the period 1965-1972, and found that there are two types of mosquitoes that bite people. It is the female mosquito that bites people during the day. The mosquitoes that bite during the night come from stagnant water. The mosquitoes lay eggs only when sucking blood. They do not lay eggs when eating other types of food. These mosquitoes do not lay their eggs in natural water sources. Instead, they lay their eggs in water sources inside houses, such as in water jars, food chests, flower vases, flowerpots, and coconut shells containing water. Even if there is just a small amount of water, these mosquitoes can lay eggs. But they cannot fly very far, 100 meters at most.

#### Spread of Disease Noted

Bangkok MATICHON in Thai 9 Sep 87 p 3

[Unattributed report: "Dengue Fever Has Spread Throughout the City; Village Scouts Have Been Mobilized To Spray the Mosquitoes"]

[Excerpt] There is a serious outbreak of dengue fever in Bangkok Metropolitan. Village Scouts have been mobilized to eradicate the mosquitoes.

Dr Kowit Wongphanit, the director of the Health Department, Bangkok Metropolitan, said that Bangkok Metropolitan is aware of the danger posed by dengue fever, which is still spreading. This disease can kill. Thus, steps have been taken to control this disease. Approximately 200 Village Scouts from 24 zones in Bangkok Metropolitan are cooperating. Also, more than 200 officials from public health service centers throughout the city and officials from local offices are going out and giving advice to the people and distributing documents. At the same time, the homes of the sick will be fumigated and the area within a 100-meter radius of their homes will be sprayed. This will be carried on from 12 September to 31 October. This will be done every Saturday in slum areas and housing developments.

Dr Kowit said that since the beginning of 1987, 9,421 people have contracted dengue fever, and 8 have died. The worst month was July, when 1,700 people came down with this disease. The second worst month was June with 1,300 cases. Most patients are between the ages of 5 and 9.

11943

#### TRINIDAD AND TOBAGO

##### Minister of Health Cites Figures on AIDS Cases, Deaths

54400020 Port-of-Spain TRINIDAD GUARDIAN in English 17 Nov 87 p 1

[Text] Fifteen children are among 155 persons who have died of Acquired Immune Deficiency Syndrome (AIDS) in Trinidad and Tobago as of November 11, 1987. This is from a total of 207 reported cases.

Five of the children were under age five.

Health Minister, Dr Emanuel Hosein made the disclosure at yesterday's opening of a five-day regional workshop on AIDS Planning and Funding at Kapok Hotel, St Clair.

He was addressing representatives of prospective donor agencies and medical personnel from 18 Caribbean countries which are supporters of the Caribbean Epidemiology Centre (Carec).

The minister said 79 cases were homosexual males, 57 bi-sexuals, and 42 heterosexuals.

He emphasised the need for public education and change in sexual behaviour.

Supported by World Health Organisation/Pan American Health Organisation (WHO/PAHO) representative, Dr Walter Chin and Dr Mervyn Henry of the Caricom Secretariat, Dr Hosein on the media to adopt a responsible role in reporting of issues related to AIDS.

"If we do not engender confidence in the national AIDS programme, if we do not educate our citizens appropriately, we might be faced with a panic reaction" from the public, said the minister.

##### Accurately Report

He called on the media to contact the committee before reporting on AIDS and to "appropriately and accurately report on deliberations at the workshop."

Dr Hosein called on members of the workshop to look into the feasibility of screening movement of persons on a global level such as restrictions on travel but pointed out that "it is not where one goes that matters, but what one does when he gets there."

He added that this country has not set up any specialised AIDS clinic because of "the stigma" the public will attach to people seen entering such clinics.

/12223

AIDS Cases Increase From 12 to 27 in Two Months  
54400019 Port-of-Spain *TRINIDAD GUARDIAN* in English 23 Nov 87 p 16

[Text] Georgetown,(AP)—The number of persons with AIDS has increased from 12 to 27 in the past two months, Health Minister Noel Blackman announced last Thursday.

This year, four persons have died of acquired immune deficiency syndrome, according to Government reports.

/12223

## UGANDA

**20 AIDS-Infected Students Expelled From USSR**  
54000230 Nairobi *KENYA TIMES* 5 Nov 87 p 24

KNA report: "AIDS: Ugandan Students Expelled"]

[Excerpts] Twenty Ugandan students have been expelled from the Soviet Union since July this year after being found infected with the deadly disease acquired immune deficiency syndrome (AIDS), the information attache at the Soviet Union Embassy in Kampala Mr Mikhail Zevonkov confirmed yesterday.

He denied local press reports that the students had been expelled from the USSR for political reasons. The ambassador explained that the expelled students had undergone an AIDS test and that this test could be repeated up to three time. The affected people were allowed to have representatives for their diplomatic missions to ensure that the tests were scientific and objective, he said. [passage omitted]

The Soviet Union envoy said that there were about 800 Ugandan students in the Soviet Union undertaking various courses after being awarded scholarships.

/12223

## ZAMBIA

**Some Hospital Workers Contract AIDS**  
54000232a Lusaka *TIMES OF ZAMBIA* in English 13 Nov 87 p 1

[Text] Some casual workers at the UTH have been found with the AIDS virus.

UTH dermatologist Dr Sabash Hira said yesterday that nurses, doctors, consultants and other medical personnel had been tested for the virus but none are infected.

He did not say how many casual workers were infected.

Dr Hira was speaking at the national intersectoral committee on health education control of AIDS which approved a draft encouraging the use of condoms among secondary school students.

The draft written by Dr Katherine Baker, an AIDS expert, will be distributed in book form to schools.

It explains at length what the AIDS virus is about, its transmission, effects and correlation between human immunodeficiency virus (HIV) and how to avoid contracting the disease.

While urging students to abstain from pre-marital sex, it says those who decide to take the risk should use a new condom and family planning foam.

But it points out that there is still risk of getting the disease.

A leaflet on AIDS for primary school pupils was passed and would be distributed soon.

The committee had been unable to organise provincial tours because it had been "too busy".

Dr Hira presented a report on his findings after a research based on the experiences of 130 patients.

He said 20 were HIV positive, 40 had the AIDS virus while the rest had AIDS related disease (ARD).

Ninety per cent did not know the AIDS symptoms, 60 per cent did not know how it was acquired, but all had heard of the disease.

On being told they had the disease most patients registered shock, disbelief and after counseling for a few months, depression and finally resignation.

/06662

## ZIMBABWE

**Official Estimates 250,000 Carry AIDS Virus**  
09301713 Harare Domestic Service in English  
1600 GMT 30 Dec 87

[Text] The principal medical director in the Ministry of Health, Dr Godfrey Sikipa, says about one-quarter of a million people in Zimbabwe are infected by HIV, a virus which causes AIDS. Dr Sikipa says the majority of the people who have been affected by HIV do not have AIDS, but can pass on the virus sexually and through their blood. He said the carrier of HIV may develop AIDS at some later stage. Dr Sikipa said the health campaign in Zimbabwe has been successful in educating people about the disease, but it has not done so well to make people change their sexual behavior.

## INTER-AFRICAN AFFAIRS

### Togo, Burkina Officials Meet on Rinderpest Fight

01091950 Lome Domestic Service in French  
0615 GMT 9 Jan 88

[Text] Officials of animal health of Burkina Faso and Togo, in their concern to preserve the livestock in their respective countries, have decided to wage a joint war against rinderpest, a disease which is perceived as a danger for the economy of our two countries. It is in this light that animal husbandry officials of Burkina Faso and Togo based along the border met at (Tinkasse) early this week, as reported by Eunidas Koffi:

[Begin Koffi recording] The meeting, chaired by the director general of the Veterinary Services of Togo, Dr Kaniaya Tagba, reviewed the situation of the vaccination campaign against rinderpest in the Togo-burkina border zone. After exchanging views on the means and measures employed to fight against the disease which decimates livestock, the participants expressed satisfaction with the important role of animal husbandry in the economy of their countries. They discussed the ill effects of transhumance, and the participants acknowledged the need to take urgent measures to check the straying of animals along our borders. The director general of the Veterinary Services of Togo, Dr Kaniaya, congratulated the animal husbandry officials of Burkina Faso and Togo for the initiative taken to fight together against rinderpest. He asked them to further coordinate their efforts in order to make their people conscious of the importance of vaccinating animals. [end recording]

## IVORY COAST

### New Plans for Combating the Tse-Tse Fly

54000034a Abidjan FRATERNITE MATIN in French  
5 Nov 87 p 23

[Article by P.M. Abialy: "Fighting Trypanosomiasis, A New Technique for Trapping the Tse-Tse Fly"] text  
[Text] A new technique has just been established for effectively combating trypanosomiasis, or sleeping sickness. The technique will consist of trapping tse-tse flies at sites where they usually attack populations.

This endemic has raged for the past 5 years in many regions of our country, but the hardest hit foci are the Vavoua regions, where specialists detect an average of 100 to 150 cases a year.

This figure is alarming in comparison with the rest of the country, where there are a few isolated victims of trypanosomiasis, who are sent to the trypanosomiasis research center in Daloa. In addition to the prefecture secretary-general, representing the prefect, we noted the presence

of Dr Bouabre, regional health director for the Western Center; sub-prefects and Party secretaries-general from Daloa, Vavoua, and Zoukougbeu; and regional service directors.

All these personages are unanimous in recognizing the need and importance of sensitizing the rural masses in order to help specialists to go about eradicating this disease under good conditions. It was thought to have been definitively eradicated, but in fact trypanosomiasis (since that is what it is) is still raging in a number of our regions, specifically Daloa, Vavoua, Bouafle, Zoukougbeu and, to a lesser extent, Danane, Gagnoa, Aboisso, and Abengourou.

As a result, according to specialists, over 500 cases of trypanosomiasis are recorded annually throughout Ivory Coast.

Consequently, on Tuesday, 3 November, field experts from Geneva and Ivory Coast met to discuss this scourge, even though our country's situation is far from dramatic when compared to that of certain countries in Africa such as Uganda, where over 10,000 cases are reported each year.

In light of the troubling growth of this disease in the Daloa-Vavoua-Bouake triangle, the government and the party have taken steps to eradicate it completely with the help of the World Health Organization.

Thus, a new technique for combating this disease has been established in order to save human lives. According to Dr Doua Felix, head physician for the trypanosomiasis research project, the battle will be fought on two fronts: the detection and treatment of trypanosomiasis victims, and the fight against the vector, that is, the fly that carries the disease.

It is likely that this second aspect will require the participation of rural residents, since specialists are counting on their help to wage an on-going battle.

The plan calls for putting traps at sites where populations are usually bitten by the tse-tse. According to Dr Doua Felix, blue-black cloth impregnated with insecticides will be placed at sites where populations are in constant contact with the fly. In a word, for this technique specialists want to trap the flies, which are habitually attracted by this blue-black color. But is this new technique costly for the populations?

Dr Claude Laveissiere, medical entomologist at the Pierre Richet Institute in Bouake, feels that initially the populations affected should not pay to benefit from this technique, but that in the long term, when international aid has dried up, the villagers will have to bear the cost of the new method themselves.

This new technique, financed jointly by France and the WHO, will be evaluated after 2 years.

Tse-tse fly density will be compared to the pre-test level. This system will allow specialists to determine the impact of trapping on the tse-tse population.

#### Vavoua and Bouafle Hardest Hit

Specialists on trypanosomiasis, or sleeping sickness, report 500 cases (1985 figures) each year in Ivory Coast, but of these, most are to be found in certain regions, such as Vavoua and Bouafle.

Indeed, in the Vavoua department, part of the Daloa rural health sector, 100 to 150 persons, mostly farmers, contract sleeping sickness each year.

Given this situation, trypanosomiasis research project leaders have decided to conduct a test operation that will eliminate the tse-tse fly that carries the disease in 2 years. Thus, for example, in a little over 10 years, 24 percent of permanent-resident farmers in the Vavoua region have contracted this disease. In addition, 11 percent of village residents have also been infected.

With the implementation of this new technique, specialists believe that the disease may soon be wiped out. In Bouafle, the project for combating human trypanosomiasis in Africa is a subject of concern for the government and the Party, which have just allocated 15 million CFA francs to this project.

#### Detection and Treatment of Victims

More than 280 cases have been reported over the past 5 years. In the first 6 months of 1987, 19 cases were recorded. According to Dr Yao Felicien, head physician for the Bouafle rural health sector, the project to combat trypanosomiasis will be led on two fronts: the detection and treatment of victims, and the use of insecticide-impregnated screens.

Detection of victims will be conducted as follows:

1. Residents of each village or encampment will be brought together by family.
2. Each individual will be recorded by number in a register for this purpose. This census-taking operation will be done with the greatest care.
3. An IFI slide will be made with blood from a finger prick, and a capillary tube will be drawn for the CATT test.
4. Parasitology tests will be made on those with positive CATT results. These tests consist of running microcolumn filtrations (MAEC) on blood samples, and, when applicable, studying fluid from ganglionic punctures. IFI slides will be sent to the Muraz Center in Bobo-Dioulasso for analysis. Immunologically suspect individuals will be routed for further testing and treatment depending on their sector.

All staff will receive prior practical training in using the various equipment and reactive agents.

#### Insecticide-Soaked Screens To Be Set Up To Combat Vector

The help of entomologists at the Pierre Richet Institute in Bouake will be required for this aspect of the campaign. In addition, the Geographic Institute will be responsible for drawing up precise maps of research zones before operations can begin. The Bouafle rural health sector will be in charge of sensitizing the populations affected and purchasing the materials for making the screens and traps, together with the insecticides for re-impregnating the screens.

The Pierre Richet Institute will be in charge of making the screens and traps and setting them up in the field. It will also evaluate the impact of this campaign to reduce vector density.

13014

## KENYA

#### Campaign To Curb Tsetse Fly Launched

54000026 Nairobi DAILY NATION in English  
29 Oct 87 p 11

[Text] The Ministry of Livestock Development has launched a campaign to curb new outbreak of tsetse fly in South Nyanza District.

A NATION survey of Oyugis, Karachuonyo, Kodera and Kehancha found traps laid on river banks to catch the flies. Technicians and specialists from the International Centre for Insect Physiology and Ecology were working to wipe out the menace.

Kisumu veterinary sources said scouts from Keloka, Kilgoria, Lambwe Valley and Kisumu had been mobilised to help in the campaign.

A spokesman said the fly was killing a lot of livestock and they were determined to root it out. He said that by January, the tsetse would be a thing of the past.

The scouts were busy laying traps for the flies in Oyugis, Kehancha, Kodera forest and Karachuonyo.

Spraying has also been intensified in bushes along the river banks from the mountainous areas towards the lake shore. Last week the Kisumu veterinary department deployed scouts to vaccinate livestock against trypanosomiasis.

Cattle owners have been told to trim grass and bushes near their homes so the fly does not have hiding places.

The spokesman said the number of animals killed by the fly would be determined after a physical count of South Nyanza's 36,000 head of cattle.

The tsetse in south Nyanza is not new, according to reports. The species is *Glossina Pallidipes* which has been common in Kehancha, Lambwe Valley and Trans Mara. The reason for calling it new is that it is unlike *G. Fuscipes* which used to be in the area earlier.

The department is using two types of drugs in the fight against the flies—Novidium and Edhidium.

The spokesman said the operation was expensive and urged donors to give help.

There is speculation that the flies are moving towards Kisii and other sugarcane-growing areas but the traps will make it known as to how far they have gone, he said.

The South Nyanza DC, Mr Cyrus Gituai, said the new species had caused many cattle deaths.

The Nyanza Provincial veterinary services director, Dr J.H. Onyango, told the committee he had sent a team of experts to determine how far the flies had spread.

/9738

**Limited Progress Made Against Tsetse Fly**  
54000233 Nairobi SUNDAY NATION in English  
15 Nov 87 p 16

[Article by Otula Owuor: "What Headway in the Tsetse Fly War?"]

[Text] With the confirmed spreading of tsetse flies from the Lambwe Valley, where they were supposedly confined, the people of South Nyanza District are facing a severe problem, especially since the flies are said to have reached as far as Kehancha on the Tanzanian border. Tsetse flies cause deadly sleeping sickness or trypanosomiasis in humans, and in cattle (where it is also called nagana). The people of South Nyanza are not nomads, but without cattle their socio-economic activities would be affected badly.

Cattle supply milk, butter and meat while the skin is sold to generate money. The cow dung is used for manure, fuel and in building where it is used to put the finishing touches on the walls or floors of mud houses, used by most local residents.

The oxen are used for ploughing and in September peasant farmers in Kochia, Karachuonyo, Kodera, Kagan and Kanyada locations told the SUNDAY NATION that their agricultural activities could come to a standstill during the next major rainy season if cattle deaths continued, from what they called "a mysterious" disease.

Still, as many in the older generation already know, the presence of tsetse flies (maugo) can result in migration of villagers because the fear of human sleeping sickness (ndulwe) is a reality in the Lambwe community.

This is because although 24 per cent of Kenya is infested with tsetse flies, only the region around Lake Victoria seems to suffer from the dreaded human trypanosomiasis which is said to have wiped out 250,000 villagers in Uganda towards the beginning of the century.

The spread of tsetse flies in Africa has mostly been associated with countries undergoing turmoil. Thus in Zimbabwe the tsetse flies "returned" during the liberation war while in Mozambique and Angola the sleeping sickness increase is linked to the current wars against South African supported rebels.

In Nigeria the tsetse flies increased dramatically during the Biafran civil war and the same is happening in Chad. Experts are already warning that in Uganda, the flies are reoccupying or reclaiming land that was considered "liberated" from them because of the breakdown in control and monitoring activities.

Tsetse flies are said to have survived in the plains and valleys of Africa for millions of years on human blood as well as that of camels, cattle, goats, pigs, sheep, horses, donkeys and a whole range of wild animals now found in game parks and reserves.

The word "tsetse" is said to be derived from Setswana (the language of Botswana) and it means fly destructive to cattle. About 38 countries in Africa, or 10 million square kilometers, are affected by tsetse flies.

Tsetse flies, which are brown insects measuring up to two centimetres, are estimated to cause losses of up to Sh85 Billion in livestock production. The figure could be well over Sh100 billion if expenditure and losses linked to medication and human sleeping sickness are included.

Discussions with researchers at the Kenya Trypanosomiasis Research Institute (KETRI), the International Laboratories for Research on Animal Diseases (ILRAD), the International Centre for Insect Physiology and Ecology (ICIPE) and those from the Ministry of Livestock Development indicate there are up to 31 species and sub-species of tsetse fly in Africa.

Their reproduction involves the female depositing a larva every 10 days. The larva hides in the soil, forming a shell which breaks in 30 days.

Out of five types of trypanosome parasites, two can cause the disease in humans. These are *Trypanosoma brucei gambiense* and *TB rhodesiense*, which cause acute infection and was linked to the wiping out of a village along the lake shore in the mid-60s, causing 90 deaths and 600 cases in Alego Location.

However, some experts say that human sleeping sickness is nowadays confined to the Lambwe Valley, Samia and parts of Busia District.

The species that cause nagana or sleeping sickness in cattle include trypanosoma brucei, trypanosoma vivax and trypanosoma congolense. Some experts estimate that if these could be wiped out the cattle population on the continent could be increased by at least 120 million.

Three top ICIPE researchers joined those from the Ministry of Livestock to help curb the present spread of tsetse flies and the institution has developed traps that can be used to attract the flies. The centre has developed effective methods of using buffalo urine to attract the flies and is continuously devising non-chemical pesticide methods to curb the flies.

A close analysis of past work indicates half hearted efforts to curb or eliminate the fly.

In the Lambwe Valley at one time, spraying had reduced the fly population to one per cent. However, as one researcher once told me, no immediate and constant follow-up was done and there was no integrated approach to curbing the spread and breeding of tsetse flies.

Still another method of controlling tsetse flies that is considered environmentally safe is the breeding and release of males which have been sterilised using atomic radiation.

The impact of this is that females mating with these sterile males will not be fertilised, hence no larva will develop into new tsetse flies. However, this method was unsuccessful in Nigeria, Tanzania and other parts.

The failure may be linked to various factors, including the finding that laboratory bred and sterilised males seem less aggressive than the "wild" ones.

Effective efforts to control tsetse flies should continue. An integrated approach must involve clearing or trimming of undergrowth, using traps, repeated spraying and even inclusion of sterile males technique although the main danger of the latter method is that the released males can also spread the disease.

If those fail then we may return to the 1960s when some district medical officers suggested that the wildlife in the Lambwe Valley be wiped out or moved elsewhere because they were reservoir of sleeping sickness and human life would not be compared to wildlife.

/06662

## SOUTH AFRICA

### 160 Rabies Cases in Natal

*54000032b Johannesburg BUSINESS DAY in English 16 Nov 87 p 3 cases have been recorded in the Durban State Veterinary area this year—more than double last year's figure, said Durban State Vet Dr Robin Thorogood yesterday.*

The latest confirmed rabies cases this week was a puppy in Mariannhill and a stray dog at Darnall on the North Coast. Neither dog came into contact with other animals or people.

Thorogood said this year was the worst he had experienced—160 cases compared to 72 last year and 60 in 1985.

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## ZAMBIA

### Anthrax Kills Luangwa Wildlife, Population Warned

*09151901 Dakar PANA in English 1830 GMT 15 Dec 87*

[Excerpt] Lusaka, 15 Dec. ZANA/PANA)—ANTHRAX has claimed the lives of about 8,000 hippos in Zambia's Luangwa Valley since July 1987, the country's minister of tourism, Leonard Subulwa told parliament in Lusaka Tuesday.

Answering a question, Subulwa also assured the house that no human being has died from the disease since it was detected in the valley.

Anthrax is a malignant infectious disease of cattle, sheep and other mammals including man. It is caused by bacillus anthracis.

The minister reported that between 6,000 and 8,000 hippos out of a population of 40,000 died from anthrax which was caused by the severe drought in the areas. Although the on-set of rains had brought the situation in the Luangwa Valley back to normal, sufficient vaccines and drugs had been dispatched to the area, he said.

He also said any renowned anti-biotic such as penicillin, penibritin and tetracycline can cure the disease.

Subulwa said in July, a team of officers from relevant institutions such as the Ministry of Tourism and Agriculture and Water Development, the national parks, the University of Zambia School of Veterinary Services were dispatched to the Luangwa Valley together with a veterinary and wildlife expert from the Bronx Zoo in New York to assess the situation.

A leaflet cautioning people about the dangers of eating contaminated hippo meat and drinking water from the river and lagoons was distributed to the people in the valley. Subulwa also told parliament that a surveillance committee under the office of the UNIP [United National Independence Party—fbis] Central Committee member for Eastern Province had been established to keep a constant watch on the situation.

**Anthrax Outbreak Reported**  
*54000034 Lusaka ZAMBIA DAILY MAIL in English*  
*12 Nov 87 p 2*

[Text] Over 2,000 hippos have died so far from an outbreak of anthrax which has swept the Luangwa Valley.

Anthrax—a serious disease which attacks cattle, sheep and is sometimes transmitted from animals to people broke out a fortnight ago.

Wildlife Department officials confirmed the fresh outbreak which has claimed thousands of hippos. Buffaloes are also feared to have been affected.

Wildlife warden for Bangweulu Cde Maxwell Malama sent some specimen of the blood from the hippos to Lusaka for diagnosis whose results was confirmed the latest outbreak.

Shores of the Luangwa river which passes through the valley are littered with dead hippos and some poachers have taken to cutting up the carcasses for drying and later selling.

Notices have been sent out to surrounding areas alerting people against eating hippo meat which is feared to be contaminated.

Areas ranging from Chama, Petauke, to Serenje have been declared "infected areas" by the Wildlife Department.

Wildlife scouts have been ordered by Cde Malama to thoroughly check people travelling from the valley suspected to be carrying hippo meat which must be destroyed on the spot.

A Zambia Information Services (ZIS) team which visited the valley counted over 1,000 dead hippos near the river.

"The situation is very serious and something must be done immediately to avert the entire hippo population from extinction," a ZIS officer said.

And because of the anthrax outbreak special road blocks have been mounted by the Wildlife Department, sealing off the valley.

/06662

INDIA

New Biotype Destroying Rice Crop Identified  
54500057 Madras *THE HINDU* in English  
5 Nov 87 p 4

[Text] Hyderabad, Nov. 4—The All-India Directorate of Rice research here has identified a new biotype which is appearing since last kharif season and has destroyed rice crop in a big way. It has been named by the Rice Directorate as 'biotype No 4' and is said to be 'more virulent'.

Dr. B. Venkateswarlu, Project Director, says that the well-known resistant varieties, *phalguna*, *surekha* and others from different sources had all become susceptible to this pest.

'This is the first time such a virulent biotype has appeared. Farmers should be highly cautious against this biotype which is likely to spread to different parts', he stated in a press release.

During kharif 1986 the *gall midge* outbreak was experienced in 31,000 hectares in Srikakulam and Vizianagaram districts which caused a loss estimated around Rs. 15 crores. All the resistant varieties have become susceptible which is an unexpected situation which has caused panic and astonishment among farmers and farm scientists.

Consequently, the Rice Directorate organised a mini technical mission at Srikakulam to assess the nature of the pest and identify the possible resistant cultivars. All the resistant lines developed in the country were assembled and exposed to this pest at Thummarada and Regulapadu in Srikakulam district and at Nagulu and Narayananapuram in Vizianagaram district.

Out of the 125 cultures exposed, only 12 have shown resistance consistently at all the test sites. They are all derivatives of *veluthacheera*, and *orumundakan* varieties.

Dr. Venkateswarlu says that the new insect was collected and mass-reared under controlled conditions by scientists of the Rice Directorate. It was found that not only all the varieties so far released were damaged, but several donors which were earlier known for resistance to the existing biotypes were also found susceptible. The rice variety '*veluthacheera*' and its derivatives did not show any damage even under artificial infestation in the glass house.

Based on the tests, the researchers concluded that 'it is a new variety biotype and is capable of damaging even the newly developed materials.'

Dr. Venkateswarlu says that efforts being made to multiply the seed of resistant varieties early and also to develop more resistant lines that can withstand the attack of the new biotype.

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PLANTS

INTER-AFRICAN AFFAIRS

Codacide Proves Effective Against Locusts  
54000039 Monrovia *THE MIRROR* in English  
2 Dec 87 p 2

[Text] A major victory is being claimed in the war against the plagues of locusts and grasshoppers that devastate crops and vegetation in northern and central Africa, following the combined efforts of a British company and a Norwegian aid organisation.

Trials carried out by Mali government scientists have achieved remarkable results from the application of an insecticide spray using a new vegetable oil emulsifier, Codacide, developed and produced by Microcide of eastern England.

Over the past few months, the British spray specialist company has shipped and air-freighted over 60 tonnes of spray concentrate to Africa, working through the Oslo-based Stromme Memorial Foundation.

The trials took place in the Kayes region of Mali which has been badly affected by the ravages of locusts and grasshoppers. Using knapsack sprayers, teams of farm-workers treated infested crops and foliage with fenitrothion insecticide Codacide oil emulsifier and water.

Not only did they achieve a 100

grasshopper kill within 45 minutes, but did so using only one fifth of the amount of insecticide recommended by the United Nations Food and Agriculture Organisation (FAO) for sprays mixed solely with water.

Safety for Humans

This success prompted Stromme's consultant, Sigurd Fossland, to recommend that insecticide inclusion rates with Codacide should be even further reduced to only one-tenth of the FAO figure. In addition to cutting costs even more, this would obviate any threat to beneficial insects in the vicinity.

When mixed with pesticide or herbicide, Codacide completely surrounds the chemical molecules with capsule-like droplets of vegetable oil. Applied with water as a spray these droplets stick to the insect or plant and spread evenly over the surface, allowing efficient penetration by the chemical.

Unlike water-based spray concentrates, those mixed with Codacide oil do not deteriorate in storage. According to Mr. Fossland this gave an added benefit in human safety terms to the African project, since there was no need for the workers to handle chemicals when making up spray in quantity. It can be supplied in water and ready for use.

The successful outcome of these trials means that full-scale spraying operations can now go ahead in the plagued areas of Mali and in due course, in neighbouring African states. In fact, helicopters are already in action applying spray containing only one-tenth of the FAO recommended volume of pesticide.

Codacide oil has been produced by Microcide since 1984. It has been used to spray over 80,000 hectares of cereal and other crops with herbicides, fungicides and pesticides, usually at half the recommended amount of chemical.

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## IVORY COAST

**'Green Pollution' Threatens Waterways**  
54000034b Abidjan *FRATERNITE MATIN* in French  
5 Nov 87 p 23

[Article by Raphael N'Guessan: "Green Pollution, A Regional Problem"]

[Text] Ivory Coast is not the only country to suffer from the "green pollution" affecting our lagoon ecosystem, artificial lakes, and inland waterways. Like the economic crisis, this is an international problem with repercussions here in our country.

Within the West African sub-region today, this phenomenon seriously affects countries such as Benin, Togo, Ghana, and Nigeria, among others.

The problem has reached such proportions and become so serious that it has been taken up by ECOWAS, which has appointed an expert committee to study it and propose possible solution approaches to containing the scourge.

Committee chairman Dr Olu Ogunye of Nigeria has been on mission in our country for several days for the purpose of gathering information on the situation here. Dr Ogunye, whose mission has already taken him to Ghana, Liberia and Benin, says that pistia and water hyacinths are high in protein and can be used to make fertilizers or even feed for livestock. These findings are the result laboratory research; further analysis will make it possible to put this knowledge to work. In the Nigerian expert's opinion, the pistia, salvinia and water-hyacinth phenomenon is a challenge of our times that our scientist must meet.

13014

## NIGERIA

**Drought, Pest Invasion Devastate Four Northern States**

54000035 Lagos *DAILY TIMES* in English  
14 Nov 87 pp 1, 8

[Text] The menace of pests and drought are posing serious famine threat to some states in the northern part of the country. Hardest hit are the Bauchi, Sokoto and Kano states where devastating effects of drought and pests invasion have been reported.

Governors of some of the affected states have expressed fears of imminent famine in their states to members of the Presidential Task Force on drought who visited the affected areas. The task force was set up by the Federal Government to assess the extent of damage to crops by drought and pests in the affected areas.

Our Kano State correspondent, Abubakar Abdullahi reports that the devastating effect of drought and pests invasion in some parts of the Gamawa is pathetic.

The programme manager of the Bauchi State Agricultural Development Programme (BSADP) Mr. David Aluke said the situation was disastrous and critical.

Mr. Aluke lamented: "When I saw a large expanse of farmlands and crops destroyed under the heat of the sun, I wept".

Katagum, Gamawa, Shira, Jama'are and parts of Misau Local Governments are more affected by drought.

Mr. Aluke said he does not see how life could exist for long in places like Bosali, Gololo and Gamawa. Over 250 hectares of farmlands have already been destroyed by drought in the area.

/06662

**Ginger-crop Disease in Eastern Part of Country**  
01141758 Lagos *Domestic Service* in English  
1500 GMT 14 Dec 87

[Text] An outbreak of ginger-crop disease in the eastern part of the country has been reported. The National Root Crop Research Institute says the disease may destroy about 60 percent of the crop. The chief scientific officer of the institute, Dr P. Enimya, said the disease had been noticed in Anambra, Cross River, and River States. Dr Enimya said that long-term control measures were required.

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